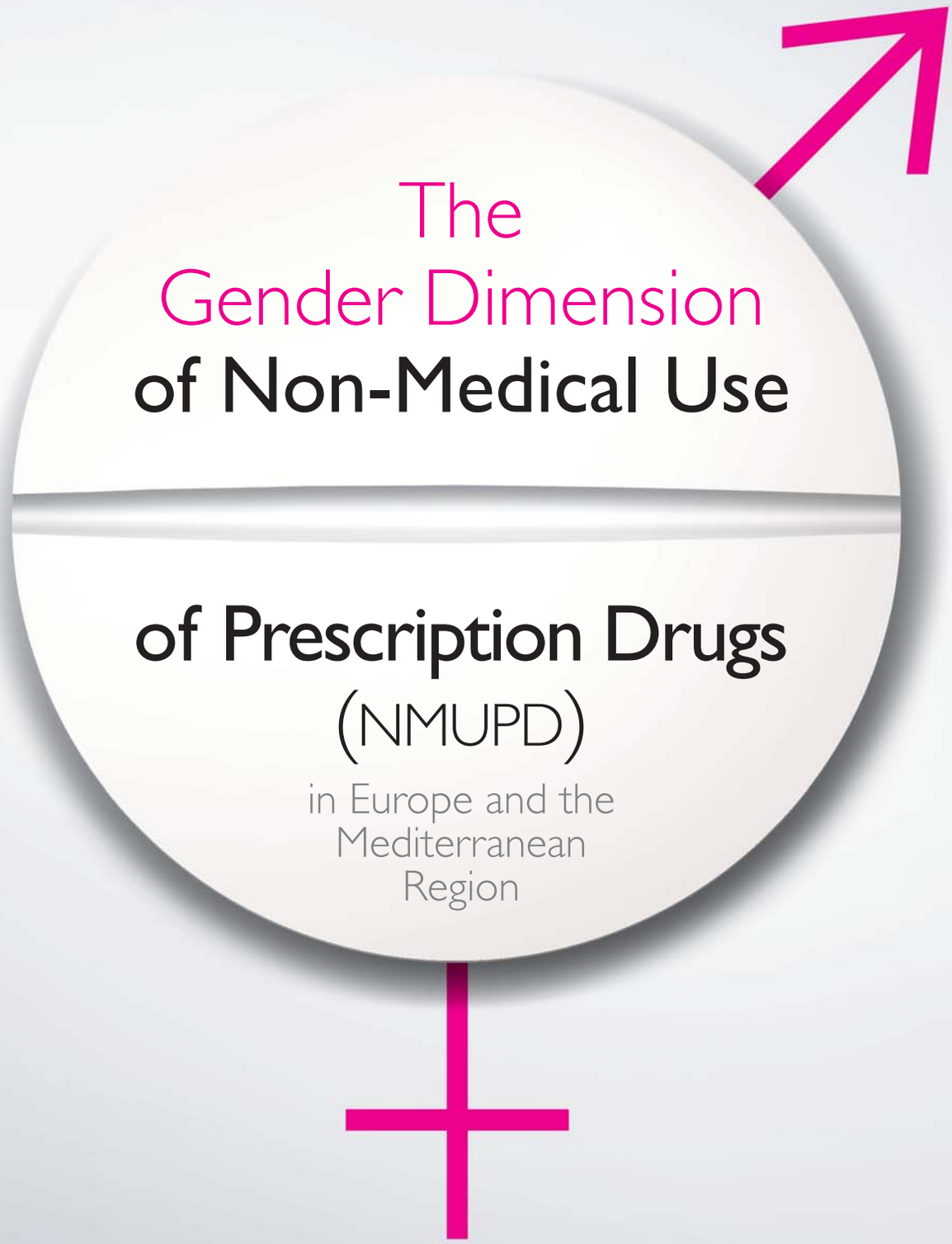
The Gender Dimension of Non-Medical Use of Prescription Drugs (NMUPD)

in Europe and the Mediterranean Region



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Presidency of the Council of Ministers Department for Anti-drug Policies of Italy

Pompidou Group
Groupe Pompidou

COUNCIL OF EUROPE
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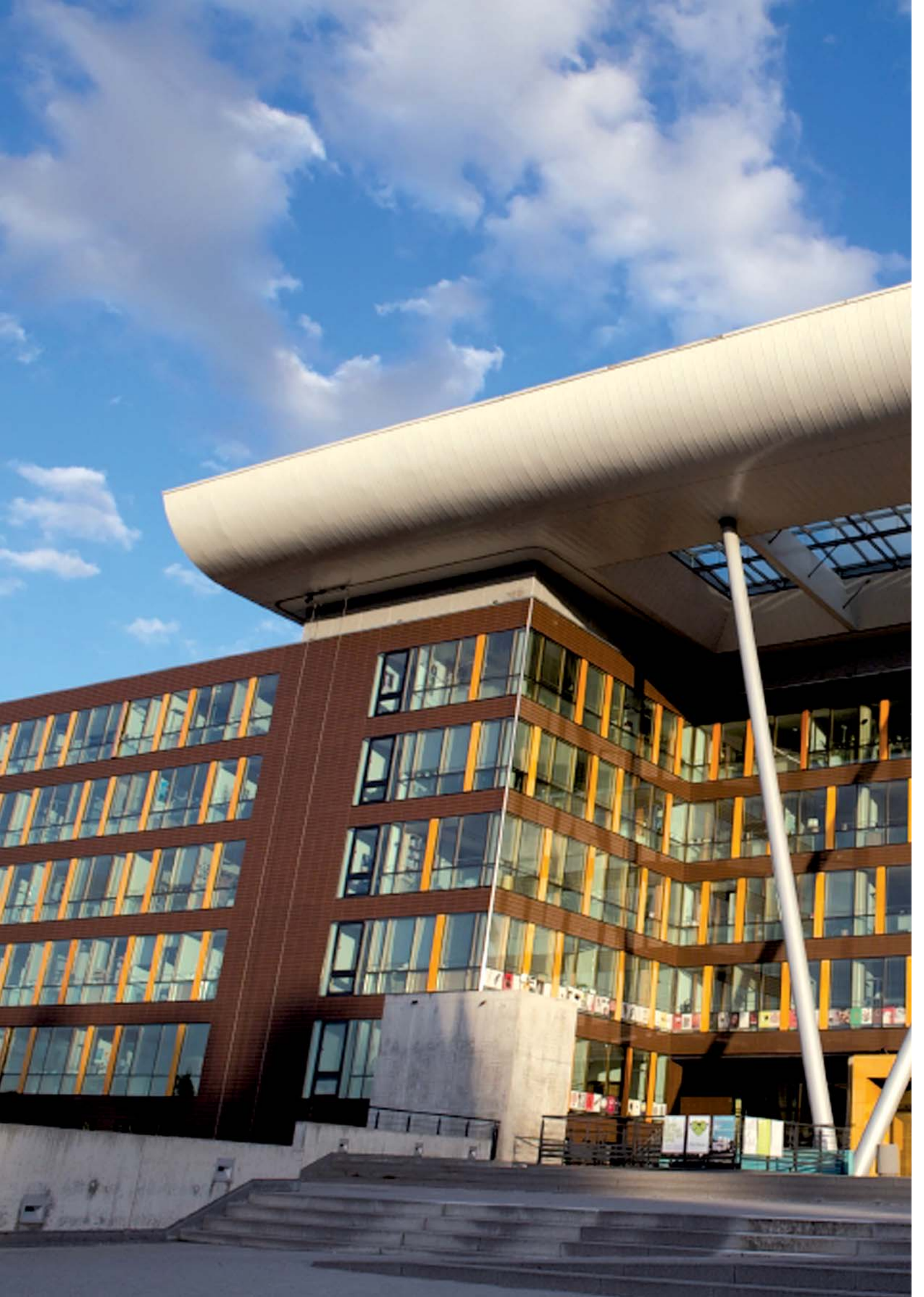
Co-operation Group to Combat Drug Abuse and Illicit trafficking in Drugs



The Gender Dimension **of Non-Medical Use of Prescription Drugs** (NMUPD)

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Executive Summary

Background

Understanding gender as it relates to drug use and drug use disorders is a critical requirement to developing effective policy and practice responses. This study aims to explore the gender dimension of non-medical use of prescription drugs (NMUPD) in Europe and the Mediterranean region and continues to build on the corpus of knowledge on the subject and also help identify gaps.

Working Definitions

The definition of NMUPD developed by the Lithuanian Presidency of the Council of the EU in 2013 was adopted: '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 (2013:14). The term "nonmedical use," does not correspond to the definition of substance related disorders in DSM-V. For the purpose of the survey tool the 'use of prescription drugs' was defined as 'consumption with doctor's prescription and/or consumption as prescribed by a medical practitioner' (p 5).

Project Purpose and Design

The main aims of this study are:

- To explore gender differences in NMUPD in Europe and the Mediterranean region through a documentation of secondary sources with the aim of constructing a snapshot of the current scenario with regards to gender and use and misuse of prescription drugs.
- To identify gaps in the data available in the various regions in Europe and the Mediterranean.
- To make recommendations for further research.
- To make recommendations for policy development and practice

A survey questionnaire targeted towards experts nominated by the Permanent Correspondents of the Pompidou Group Member States and former Member States and for the Mediterranean countries, experts nominated through the MedNET correspondents, constitutes the research tool.

Geographical scope

The project was based on a geographical representative sample of Pompidou Group member States and MedNET participating countries and some former Pompidou Group member States. 17 countries participated: Cyprus • Czech Republic • Egypt • France • Germany • Greece • Ireland • Israel •Italy • Lebanon • Lithuania • Malta • Morocco • Serbia • The Netherlands • Tunisia • Wales

Results

The literature review identifies women as a high risk category for NMUPD and shows how gender is not predictive in the same direction across different drug categories. It highlights how the telescoping phenomenon is evident for females in their NMUPD career path and that females manifest different patterns of use then males. It highlights how trauma and interpersonal violence may be causal factors for NMUPD among women.

The submitted data indicates that in the general population, the use of prescription drugs is higher for females than for males. Prescription drug use increases with age, with the 30's constituting a risk period. No conclusions about gender influences on the use of a class of prescription medication were reached.

While rates for prescription drug use have been shown to be clearly higher for women, the picture for NMUPD is less clear. Few countries reported on NMUPD: Greece and Lithuania register higher levels for females while the opposite is true for Lebanon and Israel. The initiation into NMUPD is marginally later for females than for males. The most common source of prescription medication for both males and females is a licit one (from a doctor), followed by 'from a friend or a relative' indicating the relative ease of diversion. Youth survey data indicate that rates of NMUPD for lifetime are higher for females in a number of countries and age of onset coincides with middle adolescence.

In Germany and Serbia the number of fatal overdoses related to the use of psychotropics is higher for females than for males. The data on treatment is too limited to make any reliable conclusions according to gender.

Disparity in the type of drug use surveyed in relation to prescription drug use and NMUPD makes comparison of prevalence rates particularly problematic. This does not allow for a clear documentation of the full extent of NMUPD and does not allow researchers to highlight gender differences. Data collection instruments such as general population drug prevalence surveys, do not always distinguish between 'medical use' and 'non-medical use'. **The national data concerning the use and misuse of medicines among general populations should, therefore, be interpreted very cautiously.** Not all the countries in the survey report on the source of the prescription drugs. While the monitoring of prescribing practices among young people is an important area of research, youth surveys in Europe mainly explore NMUPD.

All countries have legislation in place to control prescription drugs (psychotropics). Not all participating countries have a system in place to register the number of prescriptions for psychotropic substances and were unable to provide data in this regard. Participating countries reported a number of scientific studies on NMUPD. Most participating countries reported that the issue of NMUPD was addressed in their country's National Drugs Policy.

Recommendations

For monitoring and research:

The report recommends the Permanent Correspondents of the Pompidou Group to undertake the following actions:

- Ask researchers in their respective member states to contribute to the development of monitoring systems of general population drug use in those European and Mediterranean countries where they do not exist (with technical advice from the EMCDDA).
- Recommend to researchers in their respective countries that in addition to the use of 'sedatives and tranquillisers', the use of other categories of prescription medication be included as items in General Population Surveys.
- Ask researchers in their respective countries to ensure that the item on the source of the prescription medication is included in General Population Surveys as a core item.
- Ask researchers in the Member States to develop mechanisms for the monitoring of the Emergency Department indicator.
- Ask the EMCDDA to include, in the common core general population survey, items relating to the use

of prescription medication and to the non medical use of prescription medication and that the defining and reporting on the extent of NMUPD becomes a priority.

- Ask the EMCDDA to develop a clear method of distinguishing the monitoring of both prescription practices and NMUPD.
- Ask the ESPAD to expand the categories of prescription drugs monitored and to consider including 'prescription drug use' not only 'use without a prescription'.

For practice (prevention and treatment):

The report recommends the Permanent Correspondents of the Pompidou Group to undertake the following actions:

- Ask Member States to offer differentiated responses to the different needs of women in relation to prevention, harm reduction and treatment.
- Ask Member States to develop guidelines for prescription practices that, while securing that individuals who need psychotropic medication, for the relief of pain, for example, have access to it, this does not result in unnecessary prescription and potential diversion of controlled substances.
- Ask Member States to develop educational programs targeted towards patients on how to safely use, store and dispose of prescribed medicines.
- Ask Member States to train medical practitioners to be able to screen and identify those individuals who are at risk of dependence to hinder movement along the addictive career.

For policy:

The report recommends the Permanent Correspondents of the Pompidou Group to undertake the following actions:

- Ask Member States to develop coherent policies that also address the use and misuse of prescription medications and make specific reference to gender.
- Ask Member States to commission studies dedicated exclusively to NMUPD and addressing such specific issues as the initiation, escalation, physical and psychosocial consequences in relation to women as an 'at risk' category.
- Ask Member States to develop state level prescription drug monitoring programs.
- Ask Member States to develop educational programs targeted towards patients on how to safely use, store and dispose of prescribed medicines.

After consultation by the PG Secretariat, the Gender Equality Commission Secretariat suggests:

- Further exploration of the relationship between experiences of physical, sexual and psychological violence and NMPUD.
- Asking Member States to hold a round table bringing together international organisations active in the field to present their practices/good examples on this issue.
- Asking Member states to commission a study on the relationship between violence against women and NMPUD.

Limitations

The study acknowledges a number of limitations.

Introduction

1.1 Conceptual framework and a systematic review of the literature

1.1.1 Preamble

Understanding gender as it relates to drug use and drug use disorders is a critical requirement to developing effective policy and practice responses. Gender remains one of the most central categories on society's signifying chart. Gender then intersects with other culturally and personally meaningful categories such as race, class, ethnicity, and sexual orientation. While until the very recent past research in substance abuse and addiction has focused mainly on men, it is now acknowledged that biological, social and psychological differences between men and women impact on the prevalence, nature of, comorbidity, intervention and lived experience of substance use disorders (Back, Contini, & Brady, 2006). The EMCDDA, in a publication on gender perspectives on drug use, highlights how 'gender influences not only patterns and levels of drug consumption in Europe, but also how responses to drug problems are planned and implemented' (2006: 21). Gender is also a core objective in the EU drug action strategy. Differences have consistently been documented between men and women in relation to the prevalence of drug use, patterns of drug use and drug-related problems. Such variances necessitate different approaches to prevention, treatment and harm reduction. According to Brady and Randall (1999) research over the last 25 years has clearly shown that male and female substance abusers show different addictive career trajectories and motivations for use. The onset for substance use is often later for women and they are often strongly influenced by partners to use. Many female substance users have partners who also use substances (Miller & Cervantes, 1997). Women and men's addictive career is maintained by different motivational factors, as is their motivations for desistance and entering treatment. It is also evident that women tend to experience higher prevalence of comorbid psychiatric disorders, such as depressive and anxiety disorders, than do men. The presence of psychiatric illness often predates the substance use disorder in women (Brady & Randall, 1999) Women may be more likely to use substances to medicate emotional distress which may be emanating from the presence of violence in their lives. Intercultural evidence exists to support the association between addiction and interpersonal violence (physical, sexual, and emotional) in the lives of women around the world (United Nations Office on Drugs and Crime, 2004). Women are more likely to hide their substance use and are subjected to greater levels of social disapproval. They are more likely to be forced to bear the brunt of public contempt especially in cultural contexts where femininity and honour and shame are intrinsically linked, such as Mediterranean societies (Clark, 2012). All of this has important implications for the Non Medical Use of Prescription Drugs (NMUPD), where once again women's involvement presents some interesting insights. Zenker (2005) highlights how the development of gender mainstreaming as a political concept and gender specific knowledge about health and addiction has led to gender specific epidemiological data on drug use, addiction and mortality, as well as female specific data on the causes and courses of addiction with respect to health and social consequences. This has important implications for gender mainstreaming in professional work with female substance users

and addicts, including necessary professional training, the building of cooperation structures, and the compensation for existing deficits in all areas of research, practice and policy. Gender therefore continues to be an important area of research in the study of addictive behaviour. In a systematic review of the literature from 1975 to 2005 on substance abuse treatment, Greenfield and colleagues (2010) found a significant increase in attention to gender differences. This report will continue to build on the corpus of knowledge on the subject and also help identify important gaps. The changing role of women in society necessitates a continued effort in this regard and according to Brady and Randall (1999) 'the translation of the research findings to the treatment community to improve treatment outcome for both sexes will be an equally exciting challenge for the field' (241).

The Pompidou Group (PG) has always been at the forefront in relation to integrating gender into drug policy and has engaged in a number of efforts in this regard. As early as 1984 a call was made to policy makers, during a Ministerial conference, to pay more heed to the different needs of drug using men and women. The First Pompidou Group Symposium on Women and Drugs took place in 1988. A report by the Gender Equality Rapporteur of the PG (2013) emphasises the need for differentiated prevention and treatment and notes that while the gender gap for some substances continues to be felt, for other substances and patterns of drug use this gap is narrowing. It will be highlighted in the current report that this may be the case for the Non-medical Use of Prescription Drugs. The appointment of the Gender Equality Rapporteur by the Permanent Correspondents of the PG in 2012 has led to increased cooperation on an international level and the organisation of a number of seminars. The PG also hosts a project on women in prisons as part of its Prison's Programme (2010 – 2015). The PG has also been very active, through Mednet in projects on gender and drug use in Egypt and Ukraine.

1.1.2 Systematic Review Methodology

In order to contextualise the present study on the gender dimension of non-medical use of prescription drugs (NMUPD) in Europe and the Mediterranean region, a systematic review was conducted. While no attempt was made at a meta analysis of the data, the following review may be defined as systematic because it was based on a clearly formulated question and consequently identified relevant studies through a systematic procedure of inclusion and exclusion. The review, while not attempting to appraise the quality of the research in terms of statistical procedures, summarizes the evidence. According to Khan et al. (2003) it is the explicit and systematic approach that distinguishes systematic reviews from traditional reviews and commentaries. They identify five steps which were adopted in this review, bar the assessment of the quality of the studies, in order to present a review of a number of issues related to NMUPD. The steps undertaken are the following:

1.1.2.1 Framing the questions for a review

How has the phenomenon of NMUPD been framed in the literature?

What are the main categories of NMUPD?

Where have studies on NMUPD been conducted? What is the state of the evidence base?

What are the prevalence rates of NMUPD in different parts of world?

What are the correlates of NMUPD?

How does gender impact on the NMUPD?

1.1.2.2 Identifying the relevant work – search method

The search for studies was extensive. Multiple resources were searched through the use of HyDI. HyDi is a one stop search engine that allows users to perform a single search through all the University of Malta's Library print and online resources without language restrictions. The study selection criteria flowed directly from the review questions. The search was limited to articles published in English and those that were easily retrievable via the home library. Whilst no date limitations were applied to the acquisition of appropriate literature, most studies were dated post 2000. Two search terms were used. Protocol 1 used the search term 'non-medical use of prescription drugs' in 'all items that contain my query words in the title' and yielded 205 results. Protocol 2 using the search term 'Gender and non-medical use of prescription drugs' in 'All items that contain my query words in the title' resulted in 33 hits.

1.1.2.3 Summarising the evidence

The evidence was summarised through the logical division of the literature review into a number of sections.

1.1.2.4 Interpreting the findings

The findings were documented in light of the main research questions identified in this report.

1.1.3 Non Medical Use of Prescription Drugs (NMUPD): defining the subject matter

In recent years NMUPD has become an issue of increasing public concern across the globe (UNODC, 2011). The UNODC define the non-medical use of prescription drugs '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.' (UNODC, 2011:1). For the purposes of this empirical research the definition developed by the Lithuanian Presidency of the Council of the EU in 2013 will be used: **'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** (2013:14). It is important to note at this stage that according to the National Institute of Drug Abuse (NIDA)[1] the term "nonmedical use," used by many of the national surveys or data collection systems does not correspond to the definition of abuse/dependence listed in the Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-IV) or to the category of substance related disorders in DSM-V. The 'use of prescription drugs' is defined in this research as 'consumption with a doctor's prescription and/or consumption as prescribed by a medical practitioner'. It is worthwhile highlighting at the outset that in many countries data collection instruments such as general population drug prevalence surveys, do not always distinguish between 'medical use' and 'non-medical use'

1.1.4 Main categories of NMUPD

Some categories of prescription medication which have psychotropic properties are liable to being used without a prescription, in a way other than as prescribed and /or for the experience and feelings that they elicit. NIDA (http://www.drugabuse.gov/sites/default/files/rrprescription.pdf) report that in the US 'According to several national surveys, prescription medications, such as those used to treat pain, attention deficit disorders, and anxiety, are being abused at a rate second only to marijuana among illicit drug users'. The same research report identifies three main classes of prescription drugs that are most commonly abused: opioids; central nervous system (CNS) depressants; central nervous system (CNS) stimulants. Following is a brief description of each category that was included in the current empirical project.

1.1.4.1 Opioids

Opioids are a class of natural, semi-synthetic and synthetic narcotics, derived from the opium poppy and/or synthesised in pharmaceutical laboratories. Opioid medications are prescribed for pain management because they reduce the intensity of pain signals in the brain. Opioids affect the brain receptors that govern the release of neurotransmitters (e.g., dopamine), which in turn regulate emotions and allow an individual to cope with physical pain. Opioids attach to opioid receptors, found in the brain, spinal cord, gastrointestinal tract, and other organs in the body thus reducing the perception of pain. Besides the reduction of pain, opioids affect brain processes to produce drug liking, tolerance, dependence, and addiction (Kosten & George, 2002). Popular medications of this type include hydrocodone (e.g., Vicodin), oxycodone (e.g., OxyContin, Percocet), morphine (e.g., Kadian, Avinza), codeine, and related drugs.

Opioids are among the most abused substances. When an opiate travels through the bloodstream to the brain, the linkage of opioid chemicals with mu opioid receptors triggers the same biochemical brain processes that reward people with feelings of pleasure when they engage in activities that promote basic life functions. Opioids are prescribed therapeutically to relieve pain, but when they activate these reward processes in the absence of significant pain, they can motivate repeated use of the drug simply for pleasure (Kosten & George, 2002). The main brain circuit that is activated by opioids is the mesolimbic reward system. This system generates signals

[1] *http://www.drugabuse.gov/sites/default/files/rxreportfinalprint.pdf*

in the ventral tegmental area (VTA) that result in the release of dopamine (DA) in the nucleus accumbens (NAc) causing feelings of pleasure. Conditioned associations result in a memory that associates these good feelings with the environment in which they occurred resulting in craving when those environments are encountered again. Prescription opioids are not always used as prescribed and according to NIDA:

'Those who abuse opioids may seek to intensify their experience by taking the drug in ways other than those prescribed. For example, OxyContin is an oral medication used to treat moderate to severe pain through a slow, steady release of the opioid. People who abuse OxyContin may snort or inject it, thereby increasing their risk for serious medical complications, including overdose.'
(http://www.drugabuse.gov/sites/default/files/rrprescription.pdf page 3).

According to the 2010 National Survey on Drug Use and Health, opioid pain relievers are the most frequently abused prescription drugs in the United States. White women are more likely to abuse prescription pain relievers than women of any other ethnicity. Overdose of opioids may lead to over sedation, aspiration of stomach contents, respiratory depression, and death. Withdrawal from opioid dependence is uncomfortable, but not life-threatening for a woman who is not pregnant. However, for pregnant women who are opioid-dependent, abrupt withdrawal from opioids can be life-threatening to the fetus (Kaltenbach, Berghella, & Finnegan, 1998). Withdrawal symptoms in opioid-dependent individuals include agitation, anxiety, muscle aches, and gastrointestinal distress. Prescription opioids are often coformulated with acetaminophen, aspirin, or ibuprofen. Use of acetaminophen at doses exceeding 4 g/d is associated with liver damage and may lead to liver failure and death [2]. Aspirin and ibuprofen may precipitate gastrointestinal bleeding and are usually contraindicated during pregnancy.

1.1.4.2 CNS depressants

CNS depressants are a group of drugs with diverse chemical structures that induce a behavioural depression. This desired effect produces relief from anxiety, inhibitions, induces relaxation, sleep, unconsciousness and anaesthesia by inhibiting the excitability of neurons. The medications prescribed for these purposes include the following:

- Benzodiazepines, such as diazepam (Valium) and alprazolam (Xanax), used to treat anxiety, acute stress reactions, and panic attacks. Triazolam (Halcion) and estazolam (ProSom) are prescribed for sleep disorders. Long term use of benzodiazepines may lead to tolerance, dependence, or addiction.
- Barbiturates, such as mephobarbital (Mebaral), phenobarbital (Luminal Sodium), and pentobarbital sodium (Nembutal), are used less frequently because of their higher risk of overdose compared to benzodiazepines. However, they are still used in surgical procedures and for seizure disorders.

White women abuse sedatives and tranquilizers significantly more frequently than women of any other race or ethnicity. Women older than 35 years are more likely to abuse sedatives and those aged 18 years to 50 years are more likely to abuse tranquillisers (SAMHSA, 2011). Abuse of sedatives often occurs in conjunction with other substances or medications. The combination of sedatives with opioids can potentiate the effect of an opioid and can increase the risk of an overdose. Abrupt withdrawal from benzodiazepines and barbiturates, can be severe and life-threatening, and includes seizures, acute heart conditions, and acute psychiatric conditions (Licata & Rowlett, 2008).

CNS depressants affect the brain neurotransmitter GABA (gamma-aminobutyric acid). GABA works by decreasing brain activity, which results in a drowsy or calming effect.
(http://www.drugabuse.gov/sites/default/files/rrprescription.pdf).

1.1.4.3 CNS stimulants

CNS stimulants are most commonly prescribed for the treatment of attention deficit hyperactivity disorder (ADHD) and include various formulations of methylphenidate (Ritalin, Concerta), dextroamphetamine (Dexedrine), and mixed-salts amphetamine (Adderall) (Greenhill et al., 2002).Although prescription stimulants are considered medically sound and efficacious for treating symptoms of ADHD, the high abuse potential of these medications, paired with an increase in both the medical and illicit use over the past

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[2] *Food and Drug Administration. FDA drug safety communication: prescription acetaminophen products to be limited to 325 mg per dosage unit; boxed warning will highlight potential for severe liver failure. Silver Spring (MD): FDA; 2011. Available at: http://www.fda.gov/Drugs/DrugSafety/ucm239821.htm. Retrieved July 27, 2014.*

decade, has captured the attention of public health officials (Kollins, MacDonald, & Rush, 2001; Johnston, O'Malley, & Bachman, 2003a, b). These substances may be used non medically for cognitive enhancement (Smith & Farah, 2011). Nonmedical use of stimulants is most common among students and women younger than 50 years. The 2010 National Survey on Drug Use and Health report indicated that 6.7% of women reported ever having used stimulants not prescribed to them. White women were two to four times more likely to abuse stimulants than women of any other race or ethnicity. These drugs can be ingested or crushed for inhalation or injection. Adverse effects of stimulants include hypertension, tachycardia, arrhythmia, and neurologic dysfunction. Prolonged abuse of stimulants can result in addiction. Withdrawal symptoms include fatigue, depression, and sleep disturbances.

1.1.5 Prevalence, correlates and patterns of use

According to the report by the Lithuanian Presidency of the Council of the EU in 2013:

'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' (page 7).

There is still no coherent and comprehensive monitoring system across the region and the different countries collect information on NMUPD in various ways. This does not facilitate the comparability of data across the Euromed region. Addressing the non-medical use of prescription drugs is a delicate matter because one needs to ensure that drugs that have recognised and needed medical use remain available while diversion and misuse is prevented. In June 2010, UNODC, together with WHO, convened a technical consultation of researchers, policy makers and practitioners to address the issue where it was highlighted how this is a new area of concern to public health and that despite alarming news of non-medical prescription drug use not much attention has been paid to this issue with very little data on prevalence and consequently little knowledge about what should be done (http://www.unodc.org/docs/treatment/PDmtg/Katri_goals_and_scope_of_the_meeting.pdf).

While the current project aims to explore the gender dimension of NMUPD, a quick review of the current evidence base on NMUPD will help to contextualise the study and allow further analysis to focus on gender.

1.1.5.1 Prevalence

According to the UNODC only some countries in Europe monitor the prevalence and patterns of non-medical use of prescription drugs (UNODC, 2011:6). The main efforts at monitoring substance use and abuse have focused on illicit substances, alcohol and tobacco and the magnitude of NMUPD is not properly known, leaving a number of gaps requiring urgent attention. According to Casati et al (2012) 'although awareness of the misuse of medicines is increasing, data on the extent of the problem in the European Union (EU) are lacking (p 228)'. Advances in the pharmaceutical industry have resulted in the development of powerful psychoactive substances that, when used appropriately, can contribute to increased health and well-being, but when used contrary to medical practice can result in harm, dependence and addiction. UNODC reports how in Europe the non-medical use of prescription drugs has not been considered to be a big concern apart from the use of opioid substitution drugs (UNODC, 2011:8).

While the evidence base in Europe is being built, the non-medical use of prescription drugs (NMUPD) is now known to be one of the most common drug problems facing individuals in the United States. According to Sigmon (2006) the incidence of the non-medical use of prescription opioids alone increased by 400% from 1990 to 2000. SAMSHA (2009) reports that in 2009 there were 7 million persons over the age of 12 who reported using drugs non-medically in the last 30 days. In addition, an estimated 5.3 million had used analgesics, 2 million had used tranquillisers; 1.3 million had used stimulants and 370 000 had used tranquillisers non-medically, all in the last month. In 2010, 2 million people reported using prescription painkillers non medically for the first time within the last year (CDC, 1011; cited in Lithuanian Presidency of the Council of the EU, 2013). In the US, the use of psychotropics ranks second after marijuana, and registers an annual prevalence rate of no less than 6.4% among the population aged 12 and above. The non-medical use of pain medication stands at 4.9% and of tranquillisers at 2.2% while the annual prevalence rates for

cocaine stand at 1.9% (SAMSHA, 2009). Many people report that prescription medication was their first drug of abuse. In 2009, prescription opioid misuse in Canada was reported at lower than the United States but 'Canadians have become the second largest consumers of prescription opioids' (Lithuanian Presidency of the Council of the EU, 2013:17). The use of prescription opioids for non-medical purposes was larger than the use of heroin (0.4% annual prevalence and 0.3% annual prevalence respectively). Stimulant use registered at 0.1 % and sedatives and tranquillisers at 0.2% (Lithuanian Presidency of the Council of the EU, 2013:17). A systematic review of the literature by Casati et al in 2012 found similarly alarming figures in some European countries, for example, in Germany it is estimated that 1.6% or 1.7% of the German population are dependent on prescription drugs. In Scotland, a cross sectional postal survey of adults discovered that the last two week prevalence of non prescription analgesic use was 37% and that women were more likely to use non prescription analgesics (p 230). A Norwegian prescription database study, 0.5% of subjects exceeded the maximum recommended dose. In France a study on community pharmacies found high levels of misuse of codeine (Gibaya et al, 2011) and concluded that fentanyl posed a significant abuse and dependence potential. In Sweden the abuse of Tramadol by women is highlighted in the review by Casati et al (2012). Finland and Sweden registered an increase in deaths by tramadol intoxication between 2002 and 2007 (cited in Casati et al 2012). In 2009 the EMCDDA reported that countries in Europe with a substantial proportion of treatment demand for sedatives and tranquillisers are Northern Ireland, Sweden, Norway and Finland. The use of benzodiazepines is common among drug users all across Europe, including substitution treatment clients. Studies show that between 11% and 70% of clients report current use of benzodiazepines. The UNODC also reports a decline in heroin use observed in the last 10 years (http://www.unodc.org/docs/treatment/PDmtg/NIAZ_presentation_1pdf.pdf) but the use of synthetic opioids, such as fentanyl, and the injection of stimulant drugs, reflect the increasingly multi-faceted nature of problem drug use in Europe (EMCDDA Statistical Bulletin 2009).

The Lithuanian Presidency of the Council of the EU (2013) concludes that 'European data concerning prescription opioid misuse are limited.'(p 19). This research hopes to redress somewhat this imbalance.

1.1.5.2 Source

An important research question to consider is what contributes to this increase in NMUPD. Increased media attention and easy access through the internet have been considered as potentially contributing factors. Other contributing factors may be the increasing numbers of prescriptions thus increasing availability, easy access through family and friends as well as improper knowledge and monitoring. The misconceptions about the relative safety and lack of addictive potential of prescription drugs is also an important consideration. SAMHSA, in the 2008 National Survey on Drug Use and Health identifies the numerous sources where pain relievers were obtained for most recent non medical use amongst people aged 12 and over (http://www.unodc.org/docs/treatment/PDmtg/Compton_Pharmaceuticals_Vienna_UNODC.pdf). The most common source was 'free from friend or relative '(55.9%) followed by 'one doctor' (18%) followed by 'bought/took from friend/relative (14.3%), other (4.8%), drug dealer/stranger (4.3%) and finally 'bought on the internet (0.4%). When asked where the friend or relative obtained the drug 81.7% reported from 'one doctor' clearly indicating the diversion of such substances from licit sources. The issue of source will be explored in the current research.

1.1.5.3 Risk Categories

1.1.5.3.1 Chronic pain patients

When a patient is in physical or emotional pain, prescribing controlled substances (Rx drugs) often appears to be the simplest and most efficient way to relieve suffering and distress. However, in a minority of cases, this approach may lead to Rx drug abuse and patient harm (Fishbain et al., 1992; Isaacson et al. 2005; Morasco & Dobscha, 2008)

1.1.5.3.2 Older adults, elderly

While older adults have been identified as an at risk group for NMUPD, there is little comparable data on drug abuse in this population (Lohse & Müller-Oerlinghausen, 2004). According to Pfeiffer-Gerschel (2010) http://www.unodc.org/docs/treatment/PDmtg/Pfeiffer-Gerschel_Vienna_2010.pdf), in Germany, 80% of prescriptions for benzodiazepines and in England 80% of prescriptions for hypnotics are for people aged 60+.

1.1.5.3.3 Adolescents and young adults

According to the National Survey on Drug Use and Health (NSDUH, SAMHSA) conducted in the USA in 2006, 9.1% of teens (aged 12-17 years) misused prescription drugs in 2005 and in 2006 there were registered as many new abusers of controlled drugs as new users of marijuana. Amongst adolescents, predictors of use included female gender, poorer academic performance and misuse of other substances (Compton & Volkow, 2006; SAMHSA, 2004, 2006; Schepis & Krishnan-Sarin, 2008; Simoni-Wastila et al., 2004). Several studies have reported recent increases in the prescription rates of stimulant medications among American youth (Olfson et al., 2003; Robison et al., 2002, 1999; Safer, Zito, & Fine, 1996). The rise in stimulant prescriptions is probably due to several factors, including increased diagnostic practices (Goldman et al., 1998) and an increased duration of treatment (Safer, Zito, & Fine, 1996).

1.1.5.3.4 Problem drug users

According to a number of researchers (Havens et al., 2011; Haydon et al., 2005; Tetrault et al., 2008; Sung et al., 2005) users of illicit substances also compliment their daily use with prescription medication.

1.1.5.3.5 People with mental health difficulties

Huang et al. (2006) found that among the mental health difficulties that are associated with NMUPD are substance use disorders. A study conducted by Wu et al. (2007) showed how the presence of mental health difficulties correlated highly with the risk of stimulant abuse in both males and females. Back et al. (2010) found that severe psychological issues were associated with NMUPD and Homish et al. (2010) found that greater levels of depressive symptoms were associated with an increased risk of NMUPD. Zullig and Divin (2012) found that depression and suicidal thoughts and attempts correlated with NMUPD more so in females than in males. This will be explored in more detail below.

1.1.5.3.6 Health care professionals

Physicians are as likely to experience drug and alcohol addiction as anyone in the general population but are more likely to abuse prescription medications. Practice of self-treatment with controlled drugs is a 'unique concern' for doctors. Other multiple factors that place health care professionals at risk include: anxiety, depression, personality problems, stress at work, family stress, bereavement, injury or accidents at work, pain and a non-specific drift into drinking have been implicated (Seppala & Berge, 2010)

1.1.5.3.7 Gender

The UNODC (2011) specified that the most prevalent risk factors associated with the abuse of prescription drugs for non medical purposes include being 'female, unmarried, aged over 34, being Caucasian, having completed high school, being in poor/fair health and drinking alcohol daily (http://www.unodc.org/documents/drug-prevention-and-treatment/nonmedical-use-prescription-drugs.pdf page 18). Furthermore ESPAD[3] reports that the lifetime non medical use of tranquillisers and sedatives without a doctor's prescription is more common amongst girls (8%) than boys (5%). Similarly, greater susceptibility of women as opposed to men for NMUPD is commonly reported (Simoni-Wastila, Ritter, & Stickler, 2004; Alonso et al., 2004). Research shows that women are more likely to use only prescription drugs, as opposed to a mixture of prescription drugs and illicit drugs, than men, while the majority of illicit drug users tend to be men. Women who use prescription drugs for non-medical purposes are rarely poly-substance users, thus creating a possible new user population. (Myers et al., 2003). Simoni –Wastila, Ritter and Stricker (2004) found that women are much more likely to use any prescription drug than men are. Brinkerhoff (2005) found that female prescription drug abusers outnumbered male prescription drug abusers and Wu et al. (2007) also found slightly higher number of females who abused prescription drugs than males. Simoni-Wastila and Strickler (2004) also found that being female, unmarried and having poor health were all risk factors for problematic use of prescription drugs. Casati et al (2012) in a review of the literature in the EU found that women are at 'increased risk of misusing medicine' (p.233). Perhaps, due to the fact that illicit drug use is seen to be more deviant and female illicit drug use is frowned upon more than male use (Hecksher & Hesse, 2009) women may be more likely to abuse prescription drugs. Inciardi and Munoz (as cited in Rigg & Ibanez, 2010) note that prescription drugs are easier to obtain than illicit drugs and there is less chance of being arrested, their use is more socially acceptable and they are perceived as safer than illicit drugs. This may contribute to the apparent higher prevalence of female NMUPD. The issue of gender, which is the main focus of the current project is explored in detail in the section below.

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[3] *http://www.espad.org/Uploads/ESPAD_reports/2011/SUMMARY%20-%20Supplement%20to%20The%202011%20ESPAD%20Report%20-%20WEB.pdf*

1.1.6 Gender and NMUPD

Research in the area of substance use has focused primarily on the use of alcohol, tobacco, and illicit substances (Ford, 2008). The relationship between these substances and gender has been extensively studied, whereby males have been consistently found to be more likely to engage in the use of alcohol, tobacco, and illicit drugs, than females. On the other hand, research regarding the role of gender in the non-medical use of prescription drugs has generated contradictory findings (Simoni-Wastila et al., 2004). While some studies have advocated higher NMUPD among females (McHugh et al., 2013; Simoni-Wastila et al., 2004; Sung, Richter, Vaughan, Johnson, & Thom, 2005; Women's Health Council, 2009; Wu et al 2007), others have suggested that NMUPD is more common among males than their female counterparts especially in relation to opioid abuse (McCabe, Knight, Teter, & Weshsler, 2005; McCabe, Teter, & Boyd, 2006; Banta-Gren etal, 2009). Findings from a 2006 NSDUH survey from SAMSHA revealed marked differences, showing men to be 1.6 times more likely to have abused prescription opioids (Back et al 2010). Additionally, some other studies have not found any significant gender differences in NMUPD (Teter, McCabe, LaGrange, Cranford, & Boyd, 2006; Viana et al., 2012). Having an LGBT status is also implicated in in the misuse of prescription drugs (Benotsch et al 2013). Back, Payne, Simpson and Brady (2010) claim that since women tend to visit physicians more often and generally identified as having more physical and emotional difficulties than do men, they may be more prone to receiving a prescription and consequently abusing of it.

1.1.7 Type of Prescription Drug

This complex relationship is probably compounded by differing use of the different types of prescription drugs amongst males and females. Gender is not predictive in the same direction across different drug categories; therefore the variation in prescription drug misuse must be evaluated according to specific types of drugs (Dollar & Ray, 2013). Studies on specific prescription drug categories have demonstrated that women are 48% more likely to use prescription anxiolytics than men (Simoni-Wastila, 2000; Simoni-Wastila et al., 2004). On the other hand, studies have shown mixed results for the non-medical use of prescription stimulants: with some indicating a greater likelihood of males using stimulants non-medically and others showing insignificant gender differences (Garnier-Dykstra, Caldeira, Vincent, O'Grady, & Arria, 2012; Lookatch, Moore, & Katz, 2014; Pilkinton & Cannatella, 2012). Wu et al (2007) found that males were more likely than females to misuse methylphenidate, which is a stimulant, but were less likely to use amphetamines or diet pills. These differences in the types of prescription drugs abused point to differences in the motives for such use. According to Dollar and Ray (2013) pain relievers are more likely to be used non-medically by men, while tranquilizers and stimulants were more commonly used non-medically by women. Connell suggests that males engage in more non-medical use of prescription pain relievers due to masculine ideals which encourage this behaviour (as cited in Dollar & Ray, 2013, p. 943). In addition, Dollar and Ray's (2013) findings may also be accounted for by studies which show that women are more likely than men to be prescribed pain relievers, and may therefore be less likely to misuse them because they have legitimate prescriptions for their use (Simoni-Wastila et al., 2004). Data from the Norwegian prescription database found the prevalence of past year prescription for carisoprodol, a centrally acting muscle relaxant used for the treatment of acute lower back pain, to be 2.4% for females and 1.3% for men. Continued substance exposure increases the likelihood of misuse, dependency, as well as withdrawal. Higher prescription rates therefore place women at higher risk for NMUPD, and as more susceptible to its effects, than men (Garnier-Dykstra et al., 2012; Gear et al., 1996; Simoni-Wastila, 2000). The issue is a complex one.

Although Garnier-Dykstra et al.'s (2012) study showed a greater likelihood of non-medical use of prescription stimulants among males than females, these gender differences decreased significantly when opportunity for exposure to the drug was accounted for. In addition, women have been found to be more likely to engage in non-medical use of prescription tranquilizers and narcotic analgesics, but not in sedative-hypnotics and stimulants use (Simoni-Wastila, 2000; Simoni-Wastila et al., 2004). Similarly to the use of stimulants in Garnier-Dykstra et al. (2012)'s study above, the difference in these prevalence rates may be accounted for by the variations in prescription rates and exposure to the particular drug. When investigating NMUPD, it is therefore necessary to take relevant confounding variables into

consideration, in order to get a more comprehensive and accurate portrayal of gender differences (Pilkinton & Cannatella, 2012). Such variables include: age, country of origin, susceptibility, comorbid disorders and exposure. The relationship between gender and NMUPD has also been studied with regards to variation in the source of the drug, exposure to particular drugs, onset of use, length of time of use, treatment, motives, and consequences of use (Back, Payne, Simpson, & Brady, 2010). These variables will hereby be addressed in the review. In Ireland a 2009 study of women and substance misuse cited national drug prevalence data from 2006/7 which showed that Irish women 'predominate in the misuse of prescription drugs [sedatives & tranquillisers, and anti-depressants]' (Women's Health Council 2009: 10). The authors of the study also reported the findings of a government committee set up to inquire into benzodiazepine use in Ireland, which 'found higher usage amongst females of all age groups' (Department of Health and Children 2002 as cited in Women's Health Council 2009), and other Irish research which showed that 'women are twice as likely as men to have benzodiazepines prescribed to them for "non-clinical" symptoms such as stress, grief, acute or chronic illness, physical pain or adjustment to a major life change and to have them prescribed for longer periods' (Cormier et al., 2004, Ballymun Youth Action Project, 2004, Poole & Dell, 2005, cited in Women's Health Council, 2009). In Sweden, Tjaderborn et al report studies which identify that there is a 58% higher tramadol prescription rate for women than for men and higher dependency rates for females (cited in Casati et al, 2012).

1.1.8 Age and Career Path

Age is one of the variables which have been considerably studied in relation to gender differences in NMUPD. According to Back et al. (2011) the age of first use differs significantly according to gender. In comparison to males, the onset for females in their study for prescription drugs (in this case opioids) was averagely six years older than the onset for males, but females were only around three years older when they started to use them regularly. This has been seen as evidence for 'accelerated disease progression' amongst females. So while it takes females longer to initiate prescription drug abuse, when they do, the problem develops faster. This is in conjunction to the telescoping phenomenon (Back et al., 2011) suggests that 'the window of opportunity for preventing progression is smaller for women' (Back et al., 2011:833). In Canada, no gender differences were observed for the non-medical use of prescription opioids among adults, however significant differences were found in high schools: with rates of 23.5% for females and 18.0% for males (Fischer, Rehm, & Gittins, 2009, p. 11). In the United States, NMUPD rates were higher among females for the ages of 12 to 17, but higher among males for ages 17 to 18 (Viana et al., 2012). In the 2011 ESPAD (European School Survey Project on Alcohol and other Drugs) report, non-prescription use of tranquillisers or sedatives was reported more by girls (8%) than by boys (5%).

There have been mixed findings for gender differences in the non-medical use of prescription pain relievers in relation to age. Some studies have suggested that females between the ages of 12 and 17 were significantly more likely than their male counterparts to be non-medical users of pain relievers: 3.0% as opposed to 2.0% (Substance Abuse and Mental Health Services Administration, 2011, p. 19).

It has already been discussed how the age of first use differs according to gender (Back et al., 2011) and how women progress faster in the NMUPD addictive career. While it takes longer for females to initiate the behaviour, when they do, the problem develops quicker than for males. Consistent with these findings, other studies have shown that males were more likely to develop prescription drug abuse, while females were more likely to develop prescription drug dependence. Females are more likely to become chronic users than males. Available data from the Drug Abuse Warning Network (DAWN, 1998) give further credence to the gender patterns noted in this literature review. Therefore while few gender differences have been noted in the drug involvement of emergency room episodes in 1997, data show type-of-drug variation in drug-related deaths by gender. Women more frequently die from antidepressant abuse. Men have higher death rates from taking illicit drugs rather than prescription drugs. There is plenty of evidence that women are prescribed psychotropic drugs more often than men (Morash, Haarr, & Rucker, 1994.) and may therefore be more likely to abuse them or use them to deal with a crisis. Women report significantly more mental health and physical conditions of all kinds except for psychosis and gastrointestinal conditions (Simoni-Wastila, 2000).

1.1.9 Source

Furthermore, gender differences have been found in the source of acquisition of prescription drugs. According to Back et al. (2010) men were more likely to buy prescription opioids from a dealer, while women were more likely to obtain them from a relative. Furthermore, a much higher rate of hoarding unused opioid medication has been found for women (Back et al., 2009). These findings have implications for gender-specific prevention tactics which must target the particular source of the prescription drugs. Back et al. (2010) suggest that males are more likely to obtain prescription drugs from friends or family members, and are more likely to purchase them from dealers, in contrast to women who would usually obtain them from physicians, through legitimate prescriptions and then continue to use them after the medical need for them subsides (Back et al 2010; Mchugh et al., 2012)

1.1.10 Patterns of use

Research has shown that gender differences are not only found in prevalence rates, but also in individual experiences of the use of drugs. In a study by Back and her colleagues (2011), 24 non treatment seeking individuals (12 men and 12 women) with current prescription opioid dependence were recruited via newspaper advertisements and flyers for single in depth interviews. Several gender differences in prescription opioid use patterns and reasons for use were recorded. First men were more likely to consume prescription opioids using alternative methods, such as crushing and snorting pills. Furthermore, when asked about the time of day when consumption was most likely to happen, women were more likely to report drug taking early in the morning while men reported taking drugs in the evening. In line with various other studies, women were more often motivated by negative reinforcement processes such as coping with relational stress and negative emotions. A plethora of other studies indicate that the misuse of prescription medication by women is closely related to psychological distress and stressful life experiences while such medication is misused by men who have social and behavioural problems. Women have been found to be much more likely to use opioids to cope with stress, pain, and negative emotions, than men (Back et al., 2011; McHugh et al., 2013). In addition, findings from a study exploring socio demographic variations in motives for NMUPD suggested that the most common motives amongst males were to substitute for other drugs, and social pressure; while pain relief and sleep induction were more common amongst female respondents (Rigg & Ibanez, 2010). The former finding was supported by Jamison, Butler, Budman, Edwards, and Wasan (2010) whereby males who misused opiates were much more likely than their female counterparts to have peers with substance abuse issues: implying a link between NMUPD and social ties.

1.1.11 Risk Factors and Consequences of NMUPD

Gender differences have also been observed in the precursors and consequences of NMUPD. Physiological differences, such as variation in metabolism and hormones, predispose women for increased medical risks associated with substance use (Back, Lawson, Singleton, & Brady, 2011) and may account for women's faster escalation from regular to problematic substance use, than men (Hernandez-Avila, Rounsaville, & Kranzler, 2004). These findings have also been found for the progression of prescription opioid abuse (Back et al., 2011). Consistent with this "telescoping pattern" are the findings that women report a shorter term of non-medical use of prescription opioids when compared to men (McHugh et al., 2013, p. 39; Tetrault et al., 2007).

Gender differences in risk factors for NMUPD highlight emotional issues for women, as opposed to behavioural issues for men (Back et al., 2011). Other variables which have been implicated in this regard are psychiatric conditions: both with regards to the extent to which psychiatric conditions predict NMUPD, as well as gender differences in psychiatric conditions as consequences of NMUPD. An example of the latter is the non-medical use of prescription opioids, which has been found to be significantly more prevalent among males than females (Back et al., 2010). However, according to McHugh et al. (2013), females were more likely to experience greater psychiatric severity, as well as functional impairment in multiple social spheres, following opioid use.

The association between substance use and mental illness is significantly stronger among women than men (Lo, Monge, Howell, & Cheng, 2013). According to Grella, Karno, Warda, Niv, and Moore (2009)

mood or anxiety disorders are twice as prevalent among women, than men, manifesting non-medical use of prescription opioids. With regards to comorbid personality disorders, women were more likely to have a paranoid disorder, and men an antisocial personality disorder. Males were more likely to have substance use disorders (Grella et al., 2009).

Other gender-specific predictors of non-medical use of prescription opioids include: psychological distress, psychiatric conditions, and cigarette use among women, but not men (Back et al., 2010; Tetrault et al., 2007). This review shows that both epidemiologic studies and studies of treatment-seeking patients indicate that for women, the onset of the psychiatric disorder is more likely to antedate the onset of the substance use disorder. This suggests gender differences in the relationship between psychiatric and substance use disorders.

1.1.11.1 Trauma, Interpersonal violence and NMUPD

Back, Contini, and Brady (2006) summarise the evidence indicating a relationship between trauma, post-traumatic stress disorder, and substance use disorders may be important for women. They discuss how early difficulties, particularly sexual abuse, are more common in females and how this is associated with a risk of substance use disorders. Women exposed to violence in adulthood also demonstrate a higher risk for drug and alcohol dependence Moreover, alcohol and drug abuse place women at risk for repeated victimization, thus perpetuating the cycle of victimization and substance use. (Clark, 2011). Animal studies have demonstrated that uncontrollable stress increases drug self-administration and that neurobiologic correlates of stress appear to mediate this response (Stewart, 2000).

Consistent with the findings that women tend to use prescription drugs more for self-medication, a paper by Jamison et al. (2010) reports that women with deviant drug use behaviour were considerably more likely to have a history of physical or sexual abuse, or a history of psychiatric difficulties. Other investigations have underlined the importance of sexual and physical abuse history in forecasting opioid use (Webster & Dove, 2007; Webster & Webster, 2005).

The National Violence Against Women survey assessed lifetime exposure to potentially traumatic events (including physical assault, stalking, sexual assault, and multiple forms of victimisation) and past month prescription drug use (limited to analgesics, sedatives, and/or antidepressants) in a sample of 8000 men and 8000 women aged 18 and older (Kubiak, Arfken, Boyd, & Cortina, 2006). Increases among all forms of prescription drug use were associated with increased severity of assault history, with multiple assault victims being the most likely to have used these prescription drugs in the past month. However, this study did not differentiate or specifically examine non-medical use of prescription drugs, which is distinct from appropriate use of prescribed drugs or medications. Rape experiences have been associated with increased levels of alcohol use, marijuana use, illicit drug use, and increases in appropriate use of prescription drugs (Kilpatrick et al., 1997; Resnick et al., 1997). The self-medication hypothesis has been posited as one mechanism at least partially accounting for the relation between traumatic events such as rape, and subsequent use of substances (Brady & Randall, 1999; Stewart & Conrod, 2003). According to this perspective, the psychotropic effect of substances numb the increased psychological distress often experienced post-rape (Levenson, Oyama, & Meek, 1987). Through negative reinforcement, use is increased (Miranda, Meyerson, Long, Marx, & Simpson, 2002). Sturza and Campbell (2005) measured sedative and antidepressant use among 102 sexually assaulted women discovering that 44% used sedatives and/or antidepressants post-rape (Sturza & Campbell, 2005). 14% of these reported obtaining the drugs through illegal methods means. The women also reported that the substance use helped them cope.

In an EMCDDA publication entitled 'Women's Voices' (http://www.drugs.ie/resourcesfiles/ResearchDocs/Europe/Research/2009/EMCDDA-TP_womens_voices.pdf) qualitative data indicates that neglect and abuse in early life was a common characteristic in the personal histories of many women substance abusers and that substances are used as a 'coping mechanism' The UNODC (2004) also documents how parental neglect, as well and physical or sexual abuse, are recurring themes that make women vulnerable to developing drug problems. A cross sectional study on a nationally representative sample of women in Hungary aged 15 to 24 found that women who has been abused by a parent or a relative were more likely to misuse sedatives (Csoboth et al, 2003 cited in Casati et al, 2012)

1.1.12 Entry into treatment

Research consistently indicates that females are less likely than males to access treatment (Greenfield, Brooks, Gordon, et al., 2007). This may be attributed to a number of reasons including: social and cultural factors such as gender roles and stigma; socioeconomic issues such as not being able to afford child care; pregnancy, concerns about losing custody of children; and problems associated with dual diagnosis (Brady and Randall, 1999). Women may also seek help from other settings than dedicated drug treatment settings. When they do enter treatment, however, the outcomes are similar than those for males, or better (Hser, Joshi, Maglione et al., 2001). Research is still inconclusive about wither gender specific treatment is best, but what is known is that treatment that allows women to take their children with them have higher retention rates, which is conducive to better outcomes. (Hughes, Coletti, Neri, et al., 1995).

1.1.13 LGBT

In a study by Benotsch et al. (2013) transgender adults (N = 155) recruited from community venues in the Mid-Atlantic region completed anonymous, self-administered surveys assessing demographic information, NMUPD and other substance use, the non-medical use of hormones, psychosocial factors, and psychiatric symptoms. 26.5% of participants reported lifetime NMUPD with the most commonly reported medications used non-medically being prescription analgesics (23.9%), anxiolytics (17.4%), stimulants (13.5%), and sedatives (8.4%). Non-medical use of hormones was also frequently reported (30.3%). Participants reporting NMUPD were also more likely to report the use of illicit drugs. NMUPD, but not the non-medical use of hormones, was associated with lower self-esteem, more gender identity-based discrimination, and more self-reported symptoms of anxiety, depression, and somatic distress. Psychiatric symptoms remained statistically associated with NMUPD after controlling for demographic factors and other substance use. Prescription drug misuse was relatively common in this sample and was robustly associated with emotional distress. Kelly and Parsons (2010) reported high rates of lifetime NMUPD among men who have sex with men (MSM) (49.2%) recruited from New York. A somewhat lower lifetime rate (37.7%) was reported in a sample of MSM recruited in Denver (Benotsch et al., 2011). Kecojevic and colleagues (2012) reported data from a sample of youth recruited in New York and Los Angeles who had a history of prescription drug misuse. Results showed that LGBT youth initiated misuse of opioid and tranquilizer medications at an earlier age than comparable heterosexual youth.

Prior work suggests that transgender persons have relatively high rates of both substance use (Herbst et al., 2008; Lawrence, 2008) and psychiatric symptoms (Haas et al., 2011), possibly due to stigmatization and gender identity-related discrimination (Nemoto et al., 2011). Prior research has reported high rates of the non-medical use of hormones in transgender populations (Crosby & Pitts, 2007) but few studies have examined the misuse of drugs typically used to treat pain or psychiatric conditions in this group. Kecojevic and colleagues (2012) reported data on NMUPD from a mixed sample of LGBT youth that included 16 transgender participants but results were not reported separately for these individuals. In regards to specific sexual orientations, transgender women and women who have sex with women (WSW) often have reduced access to health care from non-discriminatory providers which limits the opportunity to get adequate information for their needs, which could lead to a reduction of risk factors when bargaining for safer sex and clean injecting equipment. There is limited research on WSW and transgender women who use drugs but existing evidence suggest that neglect and discrimination towards these women often puts them in high levels of risk of HIV infection (IHRD, 2007).

1.1.14 The impact on offspring and pregnancy

Addiction researchers and children rights organisations have explored how children of parents who abuse substances are exposed to a number of risks that are family related (Ashrafioun, Dambra, &Blondell, 2011). They are more likely to be exposed to parental conflict, financial and legal problems and to experience relocation of residence (Bernard & Mc Kegany, 2004). Much of this research has focused on children whose parents abuse illicit substances and such children have been found to be more likely to have behavioural difficulties, poor academic performance and to childhood psychopathology (Cooke et al., 2004). The abuse of opioids has been identified as contributing to greater difficulties than the abuse of other illicit substances and alcohol (Cooke et al., 2004). Little research has been conducted on the impact of the abuse of

prescription medication by parents on children. Given the noted differences between prescription drug users and illicit drug users such as lower addiction severity, higher family cohesion and lower involvement in crime (Fischer et al., 2009) the impact of NMUPD on offspring requires specific attention. An exploratory study by Ashrafioun et al. (2011), following a noted increase in prescription drug abuse in the US, found that 'a number of characteristics among parents who abuse prescription opioids are associated with less impairment in their children' (page 534). The authors conclude that the impairment in such children was similar to that of children of parents with mental health difficulties.

Prescription drug misuse does not by itself guarantee child neglect or prove inadequate parenting Paradoxically, a woman who pursues assistance for a substance abuse problem may become involved with legal and child welfare agencies, potentially leading to the loss of custody of her children. Substance abuse treatment that supports the family as a unit has been proved to be effective for maintaining maternal sobriety and child well-being. A woman must not be unnecessarily separated from her family in order to receive appropriate treatment.

Women in the postpartum period who abused prescription drugs during pregnancy and are not involved in substance abuse treatment are particularly at risk of overdose because their physiologic drug requirement decreases as their blood volume and body mass decreases. In addition, women who were abstinent from drug use during pregnancy often resume drug use postpartum, but without the tolerance to their pre pregnancy drug doses, leaving them susceptible to overdose. Various factors such as the traditional mother role or cultural backgrounds contribute to a stronger stigmatisation of female drug users compared to male drug users. Identifying potential challenges and obstacles can help enable successful treatment engagement and outcomes. Pregnancy and drug (mis)use have been one of the core research activities of the Pompidou Group. The general recommendations to the Pompidou Group from the pregnancy and drug misuse proceedings in 1997 were to provide assistance in setting up training programmes for health professionals and other groups concerned.

1.1.15 Early onset

A study by McCabe et al (2007) provides evidence that early onset of NMUPD is an important predictor for the development of prescription drug abuse and dependence. A simple one year increase in the age of onset reduced the risk of developing a substance use disorder. Among non-medical users of prescription drugs, males were more likely to develop prescription drug abuse, while females were more likely to develop drug dependence.

1.1.16 Theoretical constructs and NMUPD

According to Hirschi's social control theory "all individuals are equally enticed to commit deviance but that the presence of conventional social bonds restrains these behaviours" (as cited in Dollar & Ray, 2013, p. 933). While this theory has been primarily applied to delinquency, it may also be used to explore NMUPD, suggesting that pro-social bonds may reduce the likelihood of substance use. Social bonds were found to predict NMUPD; however the correlation between social bonds and gender was not significant (Dollar & Ray, 2013). The quality of interpersonal relationships, rather than the mere presence of social bonds, is a better predictor of NMUPD. Dollar and Ray (2013) therefore maintain that more research is necessary in order to be able to clearly understand the gendered effects of social bonds on NMUPD.

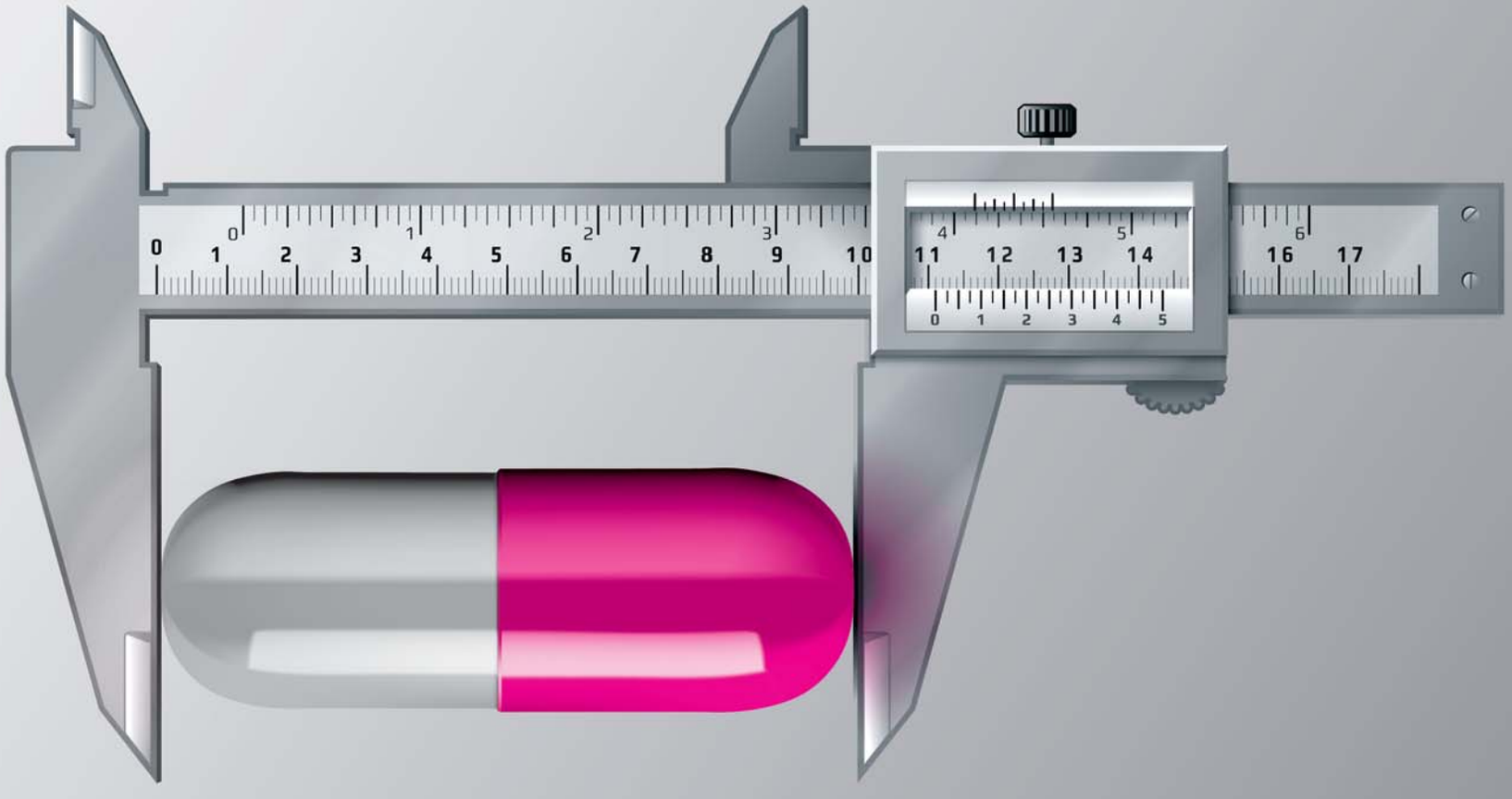
Social learning theory has been widely used to explain deviance: maintaining that social interactions influence behaviour. Ford (2008)'s study applied this theory to NMUPD, whereby non-medical prescription drug use was more frequent among adolescents whose parents and peers used drugs and had pro-substance abuse attitudes. According to Ford's study, females reported more NMUPD than males, which is consistent with other similar studies (Simoni-Wastila et al., 2004; Sung et al., 2005).

Lookatch et al. (2014) investigated perceptions towards the non-medical use of prescription stimulants. The Generalised Female Vulnerability Theory suggests that there is a double standard for female substance use, and that social norms and expectations of women's behaviour result in more negative perceptions, when compared to men. However, despite these perceptions of the misuse of other substances (George, Gournic, & McAfee, 1988), the theory was not supported by Lookatch et al. (2014) for NMUPD. This lack of gender difference may be explained as a reduction in double standards for women over time (Keyes, Li, & Hasin, 2011), however further research regarding NMUPD is required in order to support this argument.

Additionally, masculine ideals may provide an account for the variations described previously: that males were more likely to use pain relievers, but not tranquilizers and stimulants, non-medically (Connell as cited in Dollar & Ray, 2013, p. 943). Pain relievers are used for physical pain, while tranquilizers and stimulants are used for anxiety and concentration respectively. The use of pain relievers by males is more socially acceptable, and therefore men may be more likely to engage in it (Brenton & Elliott, 2013). On the other hand, the non-medical use of prescription tranquilizers and stimulants may be perceived as a deficiency of masculinity due to the feminized issues which they are perceived to resolve (West & Zimmerman as cited in Dollar & Ray, 2013). However these findings were not supported by Dollar and Ray (2013), which may suggest that gender roles may be changing (Keyes et al., 2011).

1.1.17 Conclusions and limitations in the literature

This review has highlighted male and female differences in non-medical use of prescription medication. The career path of women prescription drug users differs from that of males with women typically begin using substances later than their male counterparts but progress faster in their NMUPD career path than do males. Women are likely to be influenced by spouses or boyfriends to engage in drug use, and report different motivations for maintaining drug use. Women are likely to enter treatment earlier on in their addictive career path than men. Women also have a significantly higher prevalence of comorbid psychiatric disorders, most notably depression and anxiety which they may attempt to medicate through NMUPD. Psychiatric and emotional difficulties are likely to feature before the onset of NMUPD. Men are less likely to self-medicate (Brady & Randall, 1999). Female gender roles make it more difficult for women to enter treatment but they tend to do as well as men if they can be retained through associated support networks. Gender differences and similarities have significant treatment implications. This is especially true for the telescoping phenomenon, in which the window for intervention between progressive landmarks is shorter for women than for men. This is also true for the gender differences in physical and sexual abuse, as well as other psychiatric comorbidity that is evident in female substance abusers seeking treatment and clearly related to NMUPD. The consequences associated with substance abuse are also different for men and women. These research findings have important implications for policy and practice. First and foremost, assessment instruments need to be developed that are gender-sensitive. Policy needs to recognise that the changing roles of women in society and societal attitudes toward women will perforce influence female patterns of NMUPD. Writing in 1999, Brady and Randall in their paper on gender differences in substance use disorders concluded that ‘some gender differences likely will remain, but other gender differences will probably also emerge. The comparison of male and female substance abusers promises to be a fruitful one for researchers. The translation if the research findings to the treatment community to improve treatment outcome for both sexes will be an equally exciting challenge for the field’ (1999:241). Despite some significant findings regarding gender differences in the NMUPD described above, there are several limitations to existing research (Ford, 2008) and a number of inconsistencies are noted (Garnier-Dykstra et al., 2012; McCabe et al., 2005; Teter et al., 2006). The inconsistencies in the literature may be accounted for by the wide variations in sample sizes, populations, time frames, and data collection methods, across different studies (Lainer & Farley, 2011). An important way forward is to examine the monitoring practices among different countries in the Euromed region and establish more consistent reporting practices allow for the comparison of trends in different countries. As it currently stands the monitoring scenario is so diverse that comparing data from different countries is difficult. Therefore the complex phenomenon of NMUPD requires more careful attention in order to uncover its patterns of use. The above limitations may be addressed by using alternative analytical methods in order to enhance the current understanding of gender differences in NMUPD (Simoni-Wastila et al., 2004). Moreover, from this review it is evident that one must consider the chain of events which lead to NMUPD, and the role of gender and other variables in contributing to this progression. Identifying these patterns is vital in order to devise effective policies and practices for prevention and treatment which are sensitive to the groups at risk for addiction (Simoni-Wastila et al., 2004). This literature review provides a clear rationale for the current research which will hopefully contribute to this important goal.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2

Methodology

2.1 Introduction

This section of the report explores methodological issues pertinent to a better interpretation and understanding of the analysis presented in the following chapter. It will revisit the research agenda and the more operationalised research questions, discuss the research instrument and its development, explore issues related to procedure and data analysis and finally discuss some important limitations in the research design that impact significantly on the interpretation of the findings.

The Pompidou Group's core mission is to contribute to the development of multidisciplinary, innovative, effective and evidence-based drug policies in its member states. It seeks to link Policy, Practice and Research and focuses especially on the realities of local implementation of drug programmes. Research work, such as this presented in the current report, must be integrated into a coherent process that translates insights into actions that impact in a lasting manner on people's lives. A main task of the Pompidou group has been to assess the impact of research on policy and the development of evidence based policy and practice.

The shifting, dynamic nature of the drug phenomenon has required the Group to adapt its role in order to deal with emerging problems and changes in the drug situation. Flexibility and capacity for innovation are two key attributes that have assisted the Group in meeting this challenge. The emergence of this new phenomenon of NMUPD has prompted the PG to take timely action to attempt an initial mapping of the state of monitoring of the phenomenon in Europe and the Mediterranean. While this is an initial exploratory study, it will allow the development of a clearer agenda on how to explore and deal with the novel phenomenon of NMUPD in Europe and the Mediterranean.

Against an international background characterized by the presence of many European and international bodies working on drugs, the Pompidou Group provides a multidisciplinary forum at the wider European level where it is possible for policy-makers, professionals and researchers to discuss and exchange information and ideas on the whole range of drug misuse and trafficking problems. In order to carry out this mission, it adopts a multidisciplinary, integrated approach to all drug problems and employs a variety of working methods. In addition, the Pompidou Group undertakes a bridging role both between EU and non-EU European countries and towards neighbouring countries in the Mediterranean region as evidenced by the inclusion of MedNet countries in the current research.

2.2 Research Agenda

The current study aims to explore the gender dimension of non-medical use of prescription drugs (NMUPD) in Europe and the Mediterranean region. In recent years NMUPD has become an issue of increasing public concern.

The main efforts at monitoring substance use and abuse have focused on illicit substances as well as alcohol and tobacco and hence the magnitude of NMUPD is not properly known, leaving a number of gaps that require urgent attention. Advances in the pharmaceutical industry have resulted in the development of powerful psychoactive substances that, when used appropriately, can contribute to increased health and well-being,

but when used contrary to medical practice can result in harm, dependence and addiction. According to the UNODC only some countries in Europe monitor the prevalence and patterns of non-medical use of prescription drugs (UNODC, 2011:6). UNODC reports how in Europe the non-medical use of prescription drugs has not been considered to be a big concern apart from the use of opioid substitution drugs (UNODC, 2011:8). Women are identified as a particularly vulnerable group for the abuse of prescription drugs.

The main aims of this study are:

1. **To explore gender differences in NMUPD in Europe** through a documentation and secondary analysis of data available in the various regions in Europe and the Mediterranean region. Gender differences in NMUPD will be explored through the use of secondary sources with the aim of constructing a snapshot of the current scenario with regards to gender and use and misuse of prescription drugs.
2. **To identify gaps** in the data available in the various regions in Europe and the Mediterranean.
3. To make recommendations for **further research**.
4. To make recommendations for policy development and practice.

2.2.1 Research Questions

This research agenda lends itself to a number of **research questions** which are addressed through the research tool:

Firstly addressing the availability and reliability of data:

1. Do European and Mediterranean countries have the requisite data collection strategies in place to be able to make significant conclusions on differences in NMUPD amongst men and women?
2. What are the gaps in the data available in the different European and Mediterranean countries and how reliable is the available data?

Secondly addressing patterns and correlates of use:

3. How do the rates of prescription drug use differ according to gender in the various European and Mediterranean countries
4. How do the rates of prescription drug misuse (NMUPD) differ according to gender in the various European and Mediterranean countries?
5. What are the patterns of use among females who engage in NMUPD?
6. How do age and gender intersect in NMUPD in Europe and the Mediterranean?
7. What are the main sources for obtaining prescription drugs for non-medical purposes in Europe and the Mediterranean and how are these impacted by gender?
8. What are the rates of morbidity and mortality among populations that engage in NMUPD in Europe and the Mediterranean and how are these influenced by gender?

Thirdly addressing more theoretical concerns in relation to gender:

9. What classes of prescription medication are favoured by males and females?
10. How do the addictive careers of female prescription drug misusers differ from those of males? E.g. Age of onset.

Fourthly addressing the state of play in relation to policy and practice:

11. Is policy giving adequate attention to NMUPD and gender issues in relation to NMUPD in particular in Europe and the Mediterranean?
12. What specific prevention and harm reduction interventions should be targeted towards females?

These research questions may begin to be addressed on a pan European and Mediterranean level and a clearer understanding of the growing abuse of prescription drugs and its relationship to gender may be documented through the collection of existent data from a number of sources.

2.3 Data Sources

In the United States, where the issue of NMUPD has been studied to a significant degree and an extensive evidence base developed, a number of sources of data have been identified and these have also been adopted in the current study. The main sources for the collation of the secondary data for this study are:

1. Prevalence surveys: General population surveys and youth surveys eg. ESPAD/MEDSPAD
2. Emergency department visits/emergency hospital admissions
3. Fatal and non-fatal overdoses
4. Treatment data, including general and specialist substance use treatment services
5. Prescriptions of controlled substances dispensed
6. Scientific studies on NMUPD
7. National policy documents

2.4 Research Design

The study adopts a quantitative approach. A **survey questionnaire** targeted towards **experts** nominated by the Permanent Correspondents of the Pompidou Group Member States and former Member States and for the Mediterranean countries, experts nominated through the MedNET correspondents, constitutes the main research tool. The main task of the expert respondents was to complete the survey thus reporting back on the data that exists and /or is accessible to them in their country. The research tool did however contain open ended questions, the content of which will be analysed qualitatively through thematic analysis.

2.5 Instrumentation

The research tool was a survey questionnaire developed by the research coordinator in close collaboration with a working group [4] selected from among the expert respondents identified by the PG secretariat.

The survey questionnaire was subdivided into a number of sections informed by an extensive and systematic review which identified a number of potential sources for monitoring the phenomenon of NMUPD.

A preamble provided the necessary definitions of the phenomenon, respondent details and information about legal frameworks in the country. The first part of Section A asks for reporting on data from General Population Surveys or any other prevalence surveys conducted in the last ten years and asks for data about both prescription drug use and the non-medical use of prescription drugs (NMUPD). It also asks for information about source. The second part of section A asks expert respondents to report on national surveys with school age children conducted in the last 5 years and again seeks information on both prescription drug use and NMUPD. Section C asks for reporting on data from emergency department visits and emergency hospital admissions, while section D asks for reporting on data collected in the country on fatal and non-fatal overdoses. Section E asks for a reporting on country treatment data and section F on the registration of prescriptions of controlled substances. Section G asks respondents to provide a reference list of any studies conducted on NMUPD in their country and to highlight any salient findings. Section H attempts to document whether the issue of NMUPD is addressed in that country's national drugs policy and the final section allows the expert respondent to document the difficulties they encountered in the completion of the research tool as well as how these difficulties may have influenced the reliability and validity of the reported data. The questionnaire was uploaded onto survey monkey.

2.6 Procedure

The Pompidou Group is perceived as a pioneer in Europe regarding the integration of the gender aspect into drug policies. In its working groups and expert fora, the Group always called for better understanding of gender.[5] At the meeting of the Permanent Correspondents in Athens 26-27 November 2013, the Italian initiative regarding a gender-specific project based on the Italian Voluntary Contribution was welcomed. A gender-specific project

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[4] *Emad HAMDI-GHOZ, Marie JAUFFRET-ROUSTIDE, Philippe LE MOIGNE, Minerva Melpomeni MALLIORI, Elisabetta SIMEONI, Ernestas JASAITIS, Marilyn CLARK, Mirjana JOVANOVIĆ, Kyrie JAMES, Klaudia PALCZAK*

[5] *Gender dimension first discussed at the1984 Ministerial Conference of the Pompidou Group*

analysing gender related problems to addiction as well as collection of data was planned. A preparatory meeting of project took place in Strasbourg on 16 January 2014 between Ms Elisabetta Simeoni, Gender Equality Rapporteur for the Pompidou Group and the Pompidou Group Secretariat. A call for nomination of researchers was sent out to the Permanent Correspondents of the Member States and former Member States of the Pompidou Group, as well as the States participating in the Mediterranean network of the Group (MedNET) on 20 January 2014. The deadline for the call for nomination of experts was set to 1 March 2014. The profile of the researchers was set out as knowledge in the field of social sciences with special focus on quantitative analysis, prescription drugs and gender related issues. A Coordinating researcher was appointed by the Pompidou Group Secretariat. A working group was established with the remit of contributing to the research tool which was developed by the researcher coordinator/key researcher. The research tool was discussed by the working group in Paris on the 3rd of April and a final version was approved by the working group a week later. The research questionnaire was sent via SurveyMonkey[6] to all the expert respondents on the 14th April and they were given a two month period to complete the task. The task of the nominated expert on the project is to complete the survey reporting back on the data that exists in that country allowing the coordinating researcher to develop a data base of existent data and identify lacunae present. Respondents also received a PDF version of the questionnaire and were advised to complete it on the PDF version first and then only complete the online version once all the data has been collected.

They were given the contact details of the key researcher in case of any difficulties in the course of the completion of the questionnaire. The link to the research tool was uniquely tied to this survey and the email address. This ensured that nominated experts would complete the research tool.

2.7 Geographical scope

The project was based on a geographical representative sample of Pompidou Group member States and MedNET participating countries and some former Pompidou Group member States:
Cyprus | Czech Republic | Egypt | France | Germany | Greece | Ireland | Israel | Italy | Lebanon | Lithuania | Malta | Morocco | Serbia | The Netherlands | Tunisia | Wales

6 *Survey monkey is an online survey software ideal for social science research.*

2.8 Data analytic strategy

Survey monkey allows the researcher to export submitted data into excel and SPSS for easier analysis. For the present study excel was used. The data was analysed with two goals in mind: Part 1 of Chapter 3 provides a snapshot of the state of play regarding monitoring of NMUPD in Europe and the Mediterranean Region; while Part 2 of Chapter 3 provides a more detailed descriptive analysis of the submitted data by expert respondents in order to gain a clearer picture on NMUPD in Europe and the Mediterranean Region with a special focus on the gender dimension. The submitted available data was summarised into tables and graphs for greater ease of comprehension. The open ended questions were coded using thematic analysis.

2.9 Validation of submitted data and reporting

In an attempt to validate the submissions by the expert respondents the submitted data was exported into a PDF document for each participating country. Expert respondents were asked to identify the reasons for any skipped items into one of the following categories coded qualitatively into four categories based on the responses to question 66 of the research tool:

1. The data is not available in the particular country because it is not collected in that country.
2. The data, although collected in the country, was not available in the format required by the research tool.
3. The data, although collected in that country, was not accessible to the researcher in the time frame of the study. The required reporting might have needed additional analysis which was not possible for the expert respondent at the time of the survey.
4. The nominated expert respondent did not have access to the data required by the research tool.

The Permanent Correspondents and the contacts of the PG in the non PG countries were also asked to provide comments on the survey submitted for their country. This has ensured that the current report is presenting a valid rendition of the situation in the participating countries.

2.10 Limitations

The current research has a number of limitations.

- The study is the first of its kind and therefore exploratory in nature.
- Only descriptive statistics were able to be reported with the submitted data. Due to the source of the data being secondary statistics, no inferential analysis was able to be effected to the data therefore allowing only for limited interpretation.
- The countries are not representative of all the European and Mediterranean region.
- The analysis reflects the data submitted by the expert respondents nominated to participate by the Permanent Correspondents of the 36 member states of the Pompidou Group and of 5 MedNET countries or through direct contacts by the Pompidou Group Secretariat (Germany and the Netherlands). Altogether, data were reported from 17 countries.
- Extensive auditing work of the GPS questionnaires by the EMCDDA shows that the national data concerning the use and misuse of medicines among general populations is often not comparable and should, therefore, be interpreted very cautiously.
- The data presented is limited because a number of the questionnaires were submitted as incomplete. Some of the submitted questionnaires featured a number of skipped items. The following tables show the reasons why items were skipped by various countries, using the four categories of skipped items listed in Section 2.9 above. The corresponding questions are available in the appendix, at the end of this report.

Cyprus

	Data not collected	Not in required format	Not accessible within study timeframe	Not accessible to expert respondent
All skipped questions	X			

Czech Republic

	Data not collected	Not in required format	Not accessible within study timeframe	Not accessible to expert respondent
Question 8	X			
Questions 19 to 24	X			
Question 25			X	
Question 27			X	
Question 28			X	
Questions 34 to 37	X			
Questions 40 to 42	X			
Question 43			X	
Question 44	X			
Questions 46 to 48		X		
Question 49		X	X	
Question 50		X		
Questions 56 to 57		X	X	
Questions 59 to 61	X			

Egypt

	Data not collected	Not in required format	Not accessible within study timeframe	Not accessible to expert respondent
All skipped questions		X		

France

	Data not collected	Not in required format	Not accessible within study timeframe	Not accessible to expert respondent
Question 14	X			
Questions 19 to 24	X			
Question 26	X			
Question 27	X			
Questions 34 to 42		X		
Question 44				X
Questions 46 to 50			X	
Question 51			X	
Question 52			X	
Question 56			X	
Question 57			X	
Questions 58 to 61			X	

Germany

	Data not collected	Not in required format	Not accessible within study time frame	Not accessible to expert respondent
All skipped questions	X			

Ireland

	Data not collected	Not in required format	Not accessible within study time frame	Not accessible to expert respondent
Questions 8 to 10		X		
Questions 14 to 16		X		
Question 17		X		
Questions 19 to 25		X		
Question 27		X		
Question 28		X		
Questions 34 to 37	X			
Questions 40 to 41	X			
Question 42		X		
Questions 48 to 50			X	
Questions 59 to 61	X [7]		X	

Israel

	Data not collected	Not in required format	Not accessible within study time frame	Not accessible to expert respondent
Question 22	X			
All other skipped questions	X	X*		

* ”Inflexible web interface”

Italy

	Data not collected	Not in required format	Not accessible within study time frame	Not accessible to expert respondent
Questions 11 to 13		X		
Questions 15 to 17			X	
Questions 19 to 25	X			
Question 27	X			
Question 28	X			
Questions 34 to 37	X			
Question 38			X	
Question 43			X	
Question 45			X	
Questions 47 to 50	X			
Questions 53 to 57				X
Questions 60 to 63				X
Question 65				X
Question 67				X

[7] *Data on public prescriptions is collected but no data on private prescriptions collected.*

Lebanon

	Data not collected	Not in required format	Not accessible within study time frame	Not accessible to expert respondent
All skipped questions	X			

Lithuania

	Data not collected	Not in required format	Not accessible within study time frame	Not accessible to expert respondent
All skipped questions	X			

Malta

	Data not collected	Not in required format	Not accessible within study time frame	Not accessible to expert respondent
All skipped questions	X	X		

Netherlands

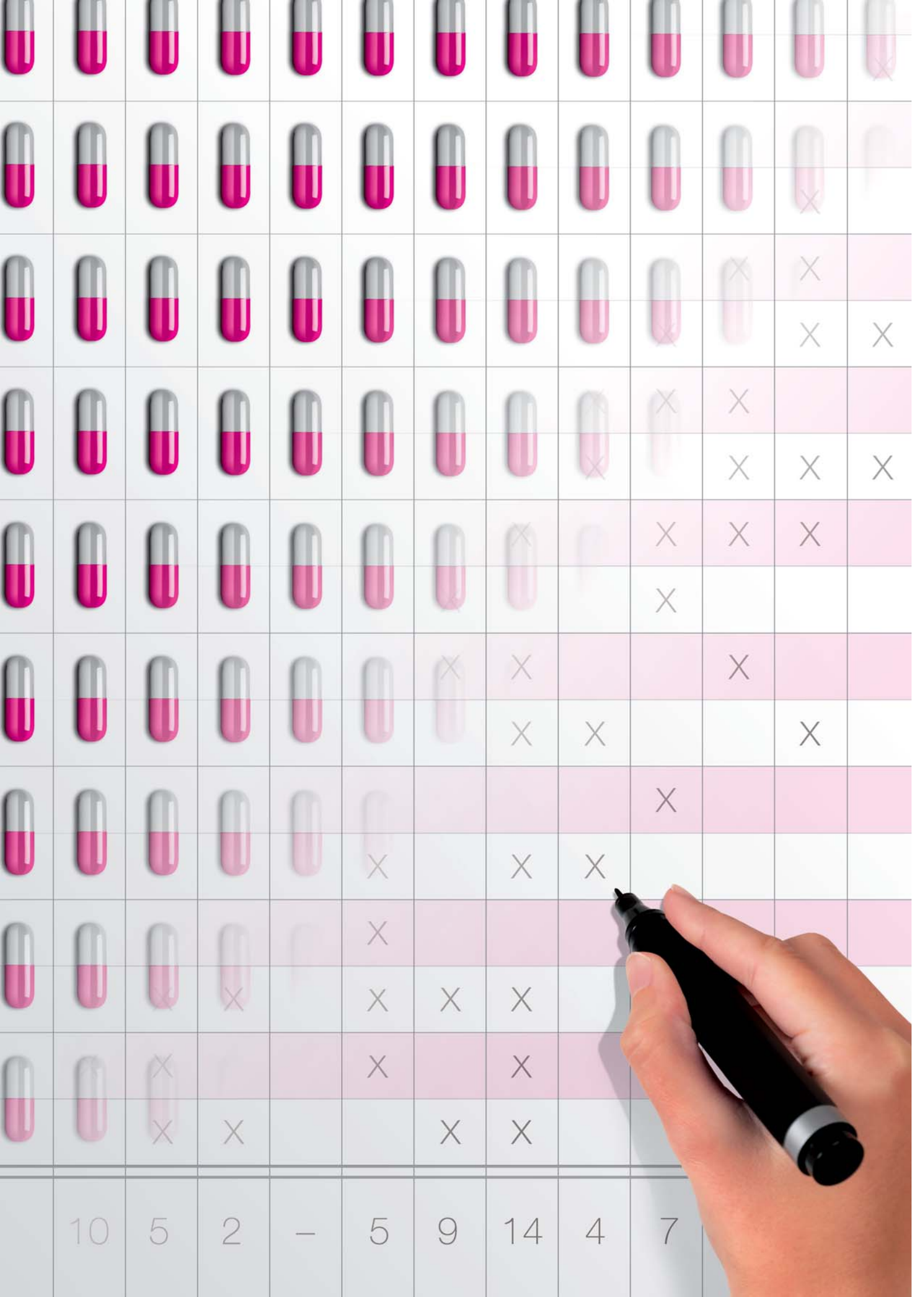
	Data not collected	Not in required format	Not accessible within study time frame	Not accessible to expert respondent
All skipped questions		X		

Serbia

	Data not collected	Not in required format	Not accessible within study time frame	Not accessible to expert respondent
Questions 19 to 21	X			
Question 23	X			
Question 24	X			
Question 27		X		
Question 28		X		
Questions 34 to 37			X	
Question 41	X			
Question 52			X	
Question 55			X	
Question 60			X	
Question 61			X	

Tunisia

	Data not collected	Not in required format	Not accessible within study time frame	Not accessible to expert respondent
All skipped questions	X			X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Results and Data Analysis

3.1 Introduction

This chapter presents the results emanating from an analysis of the data submitted by the country expert respondents in response to the questionnaire developed by the working group for the purpose of this research.
Below is a table summarising the sources of data submitted by the expert country respondents according to country.

Table 1a & 1b: Sources of data submitted by expert respondents according to country

Table 1a: Prevalence surveys of general populations

	Rates of prescription drug use available	Rates of NMUPD Available	Reports on source available
Cyprus			X
Czech Republic	X	X	
Egypt		X	X
France	X		
Germany	X		
Greece		X	
Israel	X	X	
Italy	X		
Lebanon		X	X
Lithuania	X	X	X
Malta	X		X
Morocco			
Serbia	X		
The Netherlands	X		
Tunisia			
Wales	X		

Table 1b: Other Sources

	ED visits	Emergency hospital admissions	Fatal overdoses	Non fatal overdoses	General treatment data (eg hospitals, general practitioners)	Specialist substance misuse treatment data	Registration of prescriptions of controlled substances	Report data on published studies on NMUPD	Issue of NMUPD addressed in country's National Policy Documents
Cyprus									X
Czech Republic			X	X		X			X
Egypt	X		X	X		X	X	X	X
France		X	X			X	X	X	
Germany			X			X	X	X	X
Greece						X	X	X	
Ireland		X	X	X		X		X	X
Israel		X	X					X	
Italy		X	X	X			X		
Lebanon	X					X			X
Lithuania			X			X			X
Malta				X		X		X	X
Morocco					X	X		X	X
Serbia	X		X		X	X		X	X
Netherlands		X	X		X	X		X	
Tunisia									
Wales			X		X	X	X		X

The chapter is divided into two: **Part 1** provides a snapshot of the state of play regarding monitoring of NMUPD in Europe and the Mediterranean Region; while **Part 2** provides a more detailed analysis of the available data on NMUPD in Europe and the Mediterranean Region with a special focus on the gender dimension.

3.2 Part 1: NMUPD in Europe and the Mediterranean Region – a snapshot

3.2.1 Profile of respondents:

The participating experts were nominated by the Permanent Correspondents of the Member States and the former Member States of the Pompidou Group, as well as the States participating in the Mediterranean network of the Group (MedNET). The nominated experts included: research consultants, researchers, professors, assistant professors, national drug commission managers, national drug and anti-drug policy department employees, staff of the health Ministry and psychiatrists. Altogether the data collected comes from 17 countries representing Europe and the Mediterranean Region

COUNTRY	DESIGNATION	EXPERT RESPONDENTS
Cyprus	Officer Cyprus Focal Point	Maria SAVVIDOU
Czech Republic	Drug Policy Department, the Office of the Government	Viktor MRAVCIK Barbora ORLIKOVA Pavla CHOMYNOVA
Egypt	Professor in Psychiatry, Ain Shams University, Cairo	Haroun EL RASHEED
France	Researchers Inserm – Consultant	Marie JAUFFRET-ROUSTIDE; Philippe LE MOIGNE; Thérèse BENOIT
Germany	Head of the working group Epidemiology and Diagnostics Institut FürTherapy Forschung	Daniela PIONTEK
Greece	Associate professor of psychiatry	Minerva Melpomeni MALLIORI; Ana KOKKEVI
Ireland	Researcher	Brigid PIKE
Israel	Israeli Anti-Drug Authority, Israeli Society of Addiction Medicine, Ministry of Health	Anat FLEISCHMAN
Italy	Italian National Focal Point – Department for Anti-drug Policies	Bruno GENETTI; Elisabetta SIMEONI
Lebanon	Psychiatrist	Michel SOUFIA
Lithuania	Head of Monitoring and Analysing Unit of Drug, Tobacco and Alcohol Control Department	Ernestas JASAITIS
Malta	Manager National Coordinating Unit for Drugs and Alcohol	Manuel GELLEL
Morocco	Assistant Professor of Psychiatry	Maria SABIR
Serbia	Psychiatrist/ Head of the National Commission for Drugs	Mirjana JOVANOVIC
The Netherlands	Researcher	Dike VAN DE MHEEN
Tunisia	Professor	Haifa ZALILA
Wales	Head of Secretariat, Welsh Advisory Panel on Substance Misuse	Gareth HEWITT

3.2.2 Legal framework

The table below presents a content analysis of the information on the legal framework for prescription medication submitted by participating countries.

Table 2: Legal Framework

	Psychotropic medication requires prescription	Prescription must include quantity and duration of treatment	Duration of treatment limit	Certain medication must be prescribed by a specialist	Records are kept for each prescription	Records include details of patient	Legislation pertaining to production and marketing	Psychotropic medication classified according to risk for abuse	Control measures in place	Legislation for black market trading
Cyprus								yes		
Czech Republic										
Egypt	yes							yes	yes	yes
France	yes				yes	yes		yes		
Germany	yes									
Greece										
Ireland	yes	yes	no	yes	yes	yes	yes	yes	yes	yes
Israel	yes		some	some						
Italy										
Lebanon	yes	yes								
Lithuania	yes	yes	yes	yes	yes	yes	yes	Yes	yes	yes
Malta	yes				yes					
Morocco										
Serbia										
The Netherlands	yes	some				yes				
Tunisia	some		some							
Wales	yes						yes	yes	yes	yes

Expert respondents were asked to report on the legal frameworks that control prescription drugs in their respective countries. A content analysis of the responses indicates that all countries have legislation in place to control prescription drugs (psychotropics). Variably, such legislation is aimed at the regulation of the manufacture, exportation, importation, possession, distribution, sale and improper use of the listed psychotropic drugs; the regulations are also concerned with the issuing of prescriptions by professionals and the dispensing of any such prescription at pharmacies; regulations also attempt to provide for the recording of information and the furnishing of such

information by persons engaged in the manufacture, exportation, importation, sale or distribution of any such drugs. Most countries referenced the specific legislation and this may be accessed in the individual country reports in the appendix.

A number of common themes emerged from the analysis, most notably:

1. Most countries report having a classification system in place for different types of drugs according to abuse and risk potential.
2. Country legislation is in compliance with international agreements
3. Some countries appear to be adopting evidence based efforts at legislation. Legislation is cognizant of the ever changing drug market and is amended regularly. Some countries have special legislation or are considering introducing it to control further psychotropics that research show to be abused in that country and which are implicated in adverse events.
4. The advertising of prescription drugs is regulated in most countries.
5. Some countries specifically mentioned the prohibition of purchase by mail order or via the internet.
6. Many countries report specific regulations addressing: duration of treatment; maximum dose capping; and first and repeat prescriptions.

Legislation in most countries addresses prescription practices and some notable initiatives include:

1. Stamping of the prescription in order to avoid a repeated exchange.
2. Prescription for particular substances is only permitted by specially trained professionals – this was most evident for Opiate Substitution Therapy.
3. Emphasis on handwritten prescriptions.

3.2.3 General population surveys

The table below documents the state of play with regards to the existence of General Population Surveys in Europe and the Mediterranean Region. General Population Surveys are an important source of information on the use and abuse of prescription medication.

Table 3 Countries reporting existence of GPS

	GPS y/n	Name	Year	Age range	Sample size	Re-sponse rate	Data collection	Regional rep.
Cyprus	Yes	Pancyprian General Population Survey on tobacco, alcohol and other psy-choactive substances	2012	15-64	3500	62%	Face to face interviews	
Czech Republic	Yes	National Survey on Substance Abuse	2012	15-64	6210	62%	Face to face interviews PAPI	National
Egypt	Yes	Lifetime Prevalence of Alcohol and Substance use in Egypt: a Community Survey	2005-2006	15+	44000	91.1%		Non-representative
France	Yes	Baromètre santé	2010	15-85	27653 (3543 re psychotropics)	61%	Computer assisted telephone interviewing	
Germany	Yes	Epidemiological Survey of Substance Abuse	2012	18-64	9084	53.6%	Paper and pencil Telephone Online	Whole country
Greece	Yes	Greek Nationwide General Population Survey on Psychosocial Health and Substance Use	2004	15-64	4769	48.1%	Household face to face interview Pen and pencil	Nationwide
Ireland	Yes	Drug Use in Ireland and Northern Ireland: 2010/11Drug Prevalence Survey	2010-2011	15-64	5128	60%	Face to face interviews	Nationwide
Israel	No							
Italy	Yes	General Population Survey 18-64	2012	18-64	18898	33.4%	Self-administered postal questionnaire	
Lebanon	No							
Lithuania	Yes	Prevalence of Psychoactive substance use among the general population	2012	15-64	4831	30.8%	Face to face interviewer completion Self-completion	
Malta	Yes	Use of Licit and Illicit Drugs in Malta 2013 A General Population Survey among 18-65 year olds	2013	18-65	3000	62.3%	Face to face interviews	National
Morocco	Yes	National survey on The prevalence of the Mental Disorders and Drug-Addiction	2003-2006	15+	5498		Mini International Neuro-psychiatric Interview	Representa-tive
Netherlands	Yes	National Prevalence Study	2009	15-64	5769		Computer assisted self-interview	North 11,6%, East 20,9%, South 24,2%, West 43,3%
Serbia	Yes	National survey on life styles of citizens in Serbia 2014	2014	18-64	5385	66.7%	Face to face interviews	4 official Geo-economical strata
Tunisia	No							
Wales	Yes	Welsh National Database for Substance Misuse	2013-2014	All		100%	Online data collection system	Yes

It is clear at the outset that EU member states conduct regular general population surveys. The Pompidou Group has been involved in the development and coordination of general population surveys through a pilot school survey questionnaire developed as early as 1994 by a working group focused on "surveying student drug misuse : a six-country pilot study". This then evolved and became the ESPAD later on in 1995. PG supports participation of Central and Eastern European participants in the annual ESPAD meetings. Since 1996, the EMCDDA has been developing and testing a number of epidemiological indicators to assess the extent and patterns of drug use, and its determinants and consequences. The purpose of the indicator 'Extent and pattern of drug use in the general population' is to obtain comparable and reliable measures of the extent and patterns of the consumption of different drugs in the general population, the characteristics and use patterns of drug users, and the attitudes and perceptions of different population groups. This information is obtained through national representative household surveys of the general population. Ideally surveys use the same questionnaires and methodology. On the other hand Israel, Tunisia and Lebanon do not conduct such surveys. Morocco has a prevalence survey but it is more specific in its focus on mental disorder and drug addiction.

Table 4: Categories of prescription drugs addressed in general population prevalence surveys:

	Opioids CNS	Depressants	CNS Stimulants	Other
Cyprus		X		
Czech Republic	X	X		
Egypt	X	X		X
France		X		
Germany	X	X	X	X
Greece	X	X	X	X
Ireland	X	X		X
Israel [8]		X	X	
Italy		X		
Lebanon				
Lithuania	X	X	X	
Malta		X		
Morocco	X	X	X	X
Netherlands		X		
Serbia	X	X	X	X
Tunisia				
Wales	X	X	X	X

Table 4 clearly indicates that there is disparity in the type of drug use surveyed in relation to prescription drug use and NMUPD. This makes comparison of prevalence rates particularly problematic. The inclusion of requests for information on CNS depressant use is more common than requests for information on the use of opioids, CNS stimulants and other categories of prescription medication. This does not allow for a clear documentation of the full extent of NMUPD and does not allow researchers to highlight the differing rates of use of various psychotropic substances according to gender, evidence for which exists in the US and has been clearly documented in the review in chapter 2 of this report. Gender is not predictive in the same direction across different drug categories: therefore the variation in prescription drug misuse must be evaluated according to specific types of drugs (Dollar & Ray, 2013). In this survey, the definitions for prescription drugs might not have corresponded to the definitions and operationalisations in the country General population surveys. For example, a case in point is the German submission, where the data cannot distinguish between opioid and non-opioid analgesics, and therefore total numbers for analgesics instead

[8] *Data for Israel is not representative: the source is a 2009 survey conducted by the Israeli anti-drug authority in adults aged 18-40*

of opioids were reported. Another example is the Maltese General Population Survey where only the use of sedatives and tranquillisers is reported. This underscores the need to standardise the monitoring of this phenomenon to allow for comparable data across countries.

3.2.4 Participating countries reporting on rates of prescription drug use.

The country submissions indicate that the following countries collect data that allows the extrapolation of rates of prescription drug use: **Czech Republic, France, Germany, Italy, Lithuania, Malta, the Netherlands, and Serbia.**

The country submissions indicate that the following countries do not collect data that allows the extrapolation of rates of prescription drug use: **Cyprus, Egypt, Greece, Israel, Lebanon, Morocco, Tunisia, and Wales.**

3.2.5 Participating countries reporting on rates of NMUPD

The country submissions indicate that the following countries collect data that allows the extrapolation of rates of Non-Medical Use of Prescription Drugs: **Czech Republic, Egypt, Israel, Lithuania, Lebanon, and Greece.**

Those countries which report on source of prescription drugs are: **Egypt, Cyprus, Malta, Lithuania, and Lebanon.**

Table 5 Reported Data availability – Countries reporting on PDU, NMUPD, source

	Rates of prescription drug use available	Rates of NMUPD available	Reports on source available
Cyprus			X
Czech Republic	X	X	
Egypt		X	X
France	X		
Germany	X		
Greece		X	
Israel	X	X	
Italy	X		
Lebanon		X	X
Lithuania	X	X	X
Malta	X		X
Morocco			
Serbia	X		
The Netherlands	X		
Tunisia			
Wales	X		

3.2.6 Youth Surveys

Table 6 documents the state of play with regards to the existence of surveys on drug use among the youth population in Europe and the Mediterranean Region. Youth surveys are an important source of information on the use and abuse of prescription medication among young people and allow researchers to identify the influence of gender.

Table 6: List of countries reporting they have a youth survey

	YS yes/no	Name	Year	Age range	Sample size	Response rate	Data collection	Regional rep.
Cyprus	Yes	ESPAD	2011	15-16	4243	83%	Self-completed questionnaire	Government controlled areas
Czech Republic	Yes	ESPAD	2011	15-16	3913	99%	Self completed pen and paper questionnaire	National
Egypt	No							
France	Yes	ESCAPAD	2011	17	27402	99.3%	Questionnaires	Metropolitan France
Germany	Yes	ESPAD	2011	13-19	6192	31.7%	Paper and pencil	Bavaria, Berlin, Brandenburg, Mecklenburg-Western Pomerania, Thuringia
Greece	Yes	Greek National School Population Survey on Substance Use / ESPAD survey	2011	16	5908	90%	Self-administered questionnaire Pen and paper	Nationwide
Ireland	Yes	ESPAD	2011	15-16	2207	78%	Group administered questionnaire	Nationwide
Israel	Yes	Schneider Children's Medical Center & Clalit HMO	2011	6-18	121000			Sharon-Shomron and Dan-Petah Tikva
Italy	Yes	School Population Survey15-19 (SPS-ITA)	2013	15-19	35719	77.2%	C.A.P.I.	
Lebanon	Yes							
Lithuania	Yes	ESPAD	2011	15-19	2476		Self-administered questionnaire	Nationwide
Malta	Yes	ESPAD	2011	15-16	4330	78%	Self-completed questionnaire	National
Morocco	Yes	Drug use in Moroccan Schools. MedSPAD 2013	2013	15-17	5786	100%		41 cities
Netherlands	Yes	ESPAD	2011	15-16	2044		Survey	National
Serbia	Yes	ESPAD	2011	15-17	6084	86%	Computerised questionnaire	Yes
Tunisia	Yes	MedSPAD-The preliminary study	2013	15-17	825		Auto questionnaire	Tunis
Wales	No							

The table indicates that only Egypt and Wales report not having conducted surveys on drug use among the youth population that allow extrapolation about the impact of gender. Considerable development has been achieved in the field of measuring the prevalence of substance use among young people using primarily self-report measures since the 1990's.

Table 7: Countries reporting on categories of prescription drugs addressed in youth surveys

	Opioids	CNS Depressants	CNS Stimulants	Other
Cyprus		X		
Czech Republic		X		
Egypt				
France		X	X	X
Germany		X		
Greece		X		
Ireland		X		
Israel	X			
Italy		X		
Lebanon				
Lithuania				
Malta		X		
Morocco	X	X	X	X
Netherlands		X		
Serbia	X	X	X	X
Tunisia	X	X	X	X
Wales				

As with general population surveys, it is clear that monitoring of the use of CNS depressants is more common than the monitoring of any other category of prescription medication. The literature from the United States and elsewhere indicates that the use of pain killers and the use of stimulants are equally popular among young people. Rates of prescription drug use among the youth population are not available (in most countries) since ESPAD only examines use without a prescription. The monitoring of prescribing practices among young people is an important area of research that allows researchers to determine:

- Whether prescription practices are influenced by gender as in adults
- How young people may be initiated into such use and the impact of gender on this
- How prescription medications may become diverted

Definitional consistency is essential if comparable data is to be collected within Europe and the Mediterranean region. A content analysis of the definitions of prescription medication in General Population Surveys in the region indicates that these differ greatly from country to country making the comparability of data increasingly tenuous.

3.2.6.1 Countries reporting on rates of NMUPD among the youth population

Rates for NMUPD in lifetime and/or last 12 months in the youth population are available for the following countries: Serbia, Morocco, Czech Republic, Ireland, Germany, Israel, Italy, Cyprus, Malta, Lithuania, Greece and the Netherlands

Table 8: Countries reporting on Rates of NMUPD in the Youth Population

	Lifetime	Last 12 months	Last 30 days
Cyprus	X		
Czech Republic	X		
Egypt			
France	X		
Germany	X		
Greece	X		
Ireland	X		
Israel		X	X
Italy	X	X	X
Lebanon			
Lithuania	X		
Malta	X		
Morocco	X	X	X
Serbia	X	X	
The Netherlands	X		
Tunisia			
Wales			

ESPAD reports on use without a doctor's prescription and does not allow for the extrapolation of prescription drug use and how this differs among young men and women. The phenomenon of NMUPD among young people is influenced by an increase in the prescription of psychotropics which is on the rise (Manchikanti, 2007). Perhaps the escalating abuse of prescription drugs is a reflection of the increased prescribing of drugs in the population generally. The increase in the availability of prescription drugs in the supply chain is now recognised as leading to increased diversion into the hands of abusers. Further research is needed to explore this research question.

3.2.8 Emergency Department Visits & Emergency Hospital Admissions

The country submissions indicate that the following countries report collecting data on emergency department visits and NMUPD: **Serbia, Egypt, and Lebanon.**

The country submissions indicate that the following countries report collect data emergency hospital admissions and NMUPD: **France, Ireland, Israel, and Italy.**

Table 9 Countries reporting on emergency department visits or emergency hospital admissions and NMUPD

	Emergency department visits	Emergency hospital admissions
Cyprus		
Czech Republic		
Egypt	X	
France		X
Germany		
Greece		
Ireland		X
Israel		
Italy		X
Lebanon	X	
Lithuania		
Malta		
Morocco		
Serbia	X	
The Netherlands		X
Tunisia		
Wales		

3.2.9 Fatal and non-fatal overdoses

According to SAMSHA [9], non-medical use of prescription drugs is associated with an increased number of Emergency Department (ED) visits. A review of 4 years of SAMHSA's Drug Abuse Warning Network (DAWN) data (2004-2008) of ED visits involving NMUPD estimated that the number of ED visits for the nonmedical use of opioid analgesics increased by111%. The estimated number of ED visits involving nonmedical use of benzodiazepines, which result in sedative or anxiolytic effect, increased by 89% during 2004—2008. The table above shows how it is not customary in Europe and the Mediterranean region, to collect data on the number of ED visits that are related to NMUPD. This is an area of monitoring that clearly needs to be developed. Data might also be collected on drugged driving or on-the-job accidents specific to NMUPD. The Pompidou Group launched a dramatic 30-second television spot on a young woman in hospital after a drug-induced car accident to mark its 30th anniversary at the Council of Europe. According to available information, many accidents and deaths on European roads are caused by drivers whose performance is impaired by psychoactive substances. The table below documents the state of play with regards to the monitoring of this indicator.

Table 10 Countries reporting on fatal and non fatal overdoses

	Fatal overdoses	Non fatal overdoses
Cyprus		
Czech Republic	X	X
Egypt	X	X
France	X	
Germany	X	
Greece		
Ireland	X	X
Israel	X	
Italy	X	X
Lebanon		
Lithuania	X	
Malta		X
Morocco		
Serbia	X	
The Netherlands	X	
Tunisia		
Wales	X	

The monitoring of fatal and non fatal overdoses in relation to NMUPD allows policymakers to determine the impact this problem is having and to ensure control policies that prevents such deaths. In the US data is routinely collected in this regard and indicates that rates of US deaths involving the overdose of prescription drugs increased rapidly during 1999-2006.The increase is largely attributed to deaths involving prescription opioid analgesics—this coincided with a nearly 4 fold increase in use of prescription opioids nationally (Warner, Chen, & Makuc, 2009).

9 *(http://masstapp.edc.org/sites/masstapp.edc.org/files/NMUPD%20Conseq_v%202_12%2012%20(2).pdf)*

3.2.10 Treatment data, including general and specialist substance misuse treatment services

The following countries were able to report on treatment data about clients presenting with NMUPD

- General treatment data eg hospitals, general practitioners: **Serbia, Morocco, Netherlands, Wales**
- Specialist substance misuse treatment data: **Serbia, Morocco, France, Czech Republic, Ireland, Germany, Egypt, Malta, Lithuania, Lebanon, Greece, Netherlands, Wales**

Treatment data are an important source of information regarding the problem use of prescription medication. Studies in the US and elsewhere indicate that an increasing number of individuals are presenting with substance use disorders as a result of the use of a prescription medication.

Table 11: Countries reporting on treatment data

	General treatment data (eg hospitals, general practitioners)	Specialist substance misuse treatment data
Cyprus		
Czech Republic		X
Egypt		X
France		X
Germany		X
Greece		X
Ireland		X
Israel		
Italy		
Lebanon		X
Lithuania		X
Malta		X
Morocco	X	X
Serbia	X	X
The Netherlands	X	X
Tunisia		
Wales	X	X

Data collected regularly and consistently, over a period of time, about people in drug treatment forms an important evidence base for policy makers. The treatment reporting system is a simple but powerful instrument for tracking the changing patterns of NMUPD and is a valuable epidemiological tool. A limitation of drug treatment reporting systems is that some report the number of episodes of treatment, rather than the number of individuals receiving treatment.

3.2.11 Registration of prescriptions of controlled substances

The country submissions indicate that the following countries report collecting data on the registration of prescriptions of controlled substances: **France, Germany, Egypt, Italy, Greece, the Netherlands, and Wales.**

3.2.12 Scientific studies on NMUPD

Countries which report having conducted scientific studies on NMUPD are: Serbia, The Netherlands, Ireland, Germany, Egypt, Israel, Malta, Morocco, France and Greece.

Table 12: Countries reporting studies on NMUPD

Cyprus	
Czech Republic	
Egypt	X
France	X
Germany	X
Greece	X
Ireland	X
Israel	X
Italy	
Lebanon	
Lithuania	
Malta	X
Morocco	X
Serbia	X
The Netherlands	X
Tunisia	
Wales	

3.2.13 Policy

Table 13: Issue of NMUPD addressed in country's National Policy Documents

	Issue of NMUPD addressed in country's National Policy Documents
Cyprus	X
Czech Republic	X
Egypt	X
France	
Germany	X
Greece	
Ireland	X
Israel	
Italy	
Lebanon	X
Lithuania	X
Malta	X
Morocco	X
Serbia	X
The Netherlands	
Tunisia	
Wales	X

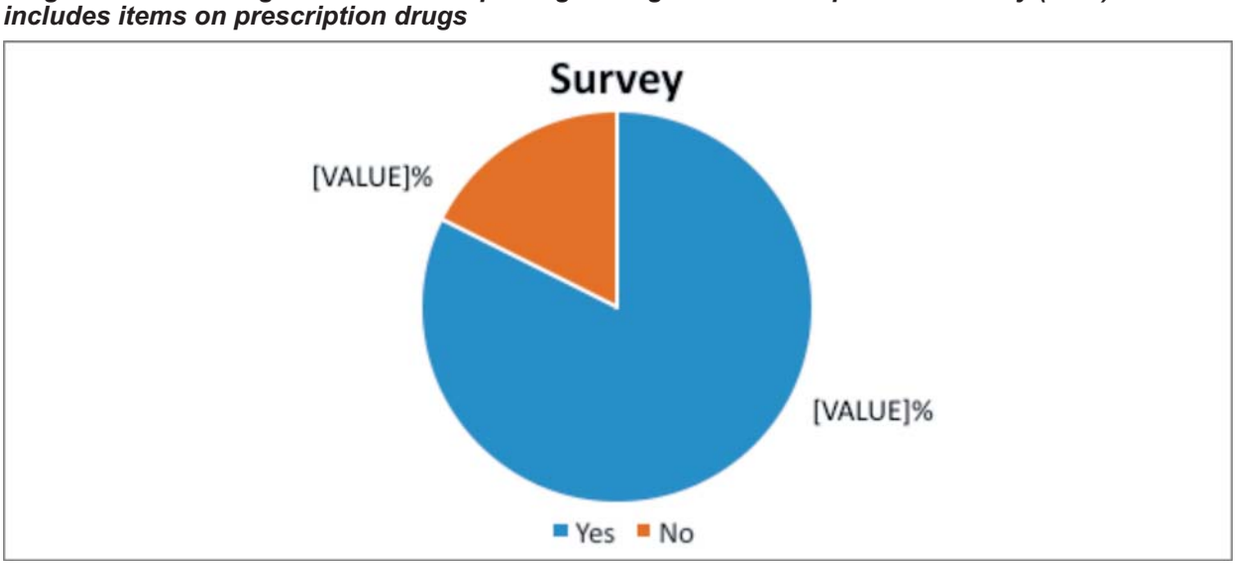
3.3 Part 2 – Data Analysis

3.3.1 Introduction

This section presents the results emanating from an analysis of the data submitted by the country expert respondents in response to the questionnaire developed by the working group for the purpose of this research. It is descriptive data since the use of secondary sources does not allow for any inferential analysis to be conducted on the data. It is important to note that the data were submitted through experts nominated by the Pompidou Group Permanent Correspondents who represent their government. For Germany and the Netherlands, the experts were chosen through long-standing contacts of the Pompidou Group and were not nominated directly by a Government representative. Each country report was also submitted to the Permanent Correspondents and/or Government representatives for final comments. A table of the designation of the researchers is available on page 41.

3.3.2 General Population Drug Prevalence Surveys

Diagram 1: Percentage of countries reporting having a General Population Survey (GPS) that includes items on prescription drugs

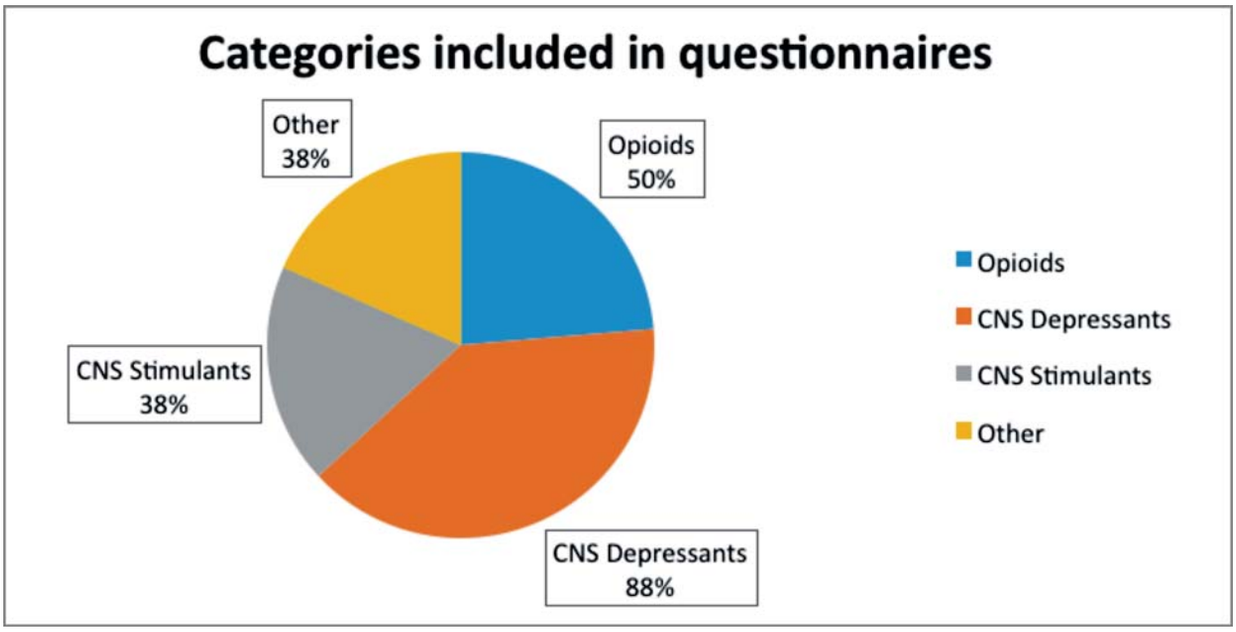


82.4% of the expert respondents reported that a GPS had been conducted in their country in the last ten years and had included items on the use of prescription drugs. 3 countries reported that they had not (17.6 %).

Table 14: Countries reporting existence of GPS

Survey on Use of prescription drugs	No survey
Cyprus	Israel
Czech Republic	Lebanon
Egypt	Tunisia
France	
Germany	
Greece	
Ireland	
Italy	
Lithuania	
Malta	
Morocco	
Serbia	
The Netherlands	
Wales	

Diagram 2: Categories of prescription drugs (psychotropics) included in the survey questionnaire



9 countries included 'Opioids', 15 countries included 'CNS depressants', 7 countries included 'CNS stimulants', and 7 countries included 'Other'. The percentages do not add up to a total of 100% because each country reported more than one category of drugs. The data reported by the expert respondents clearly indicates that CNS depressants are the most commonly researched drugs. Only some countries report on CNS stimulants.

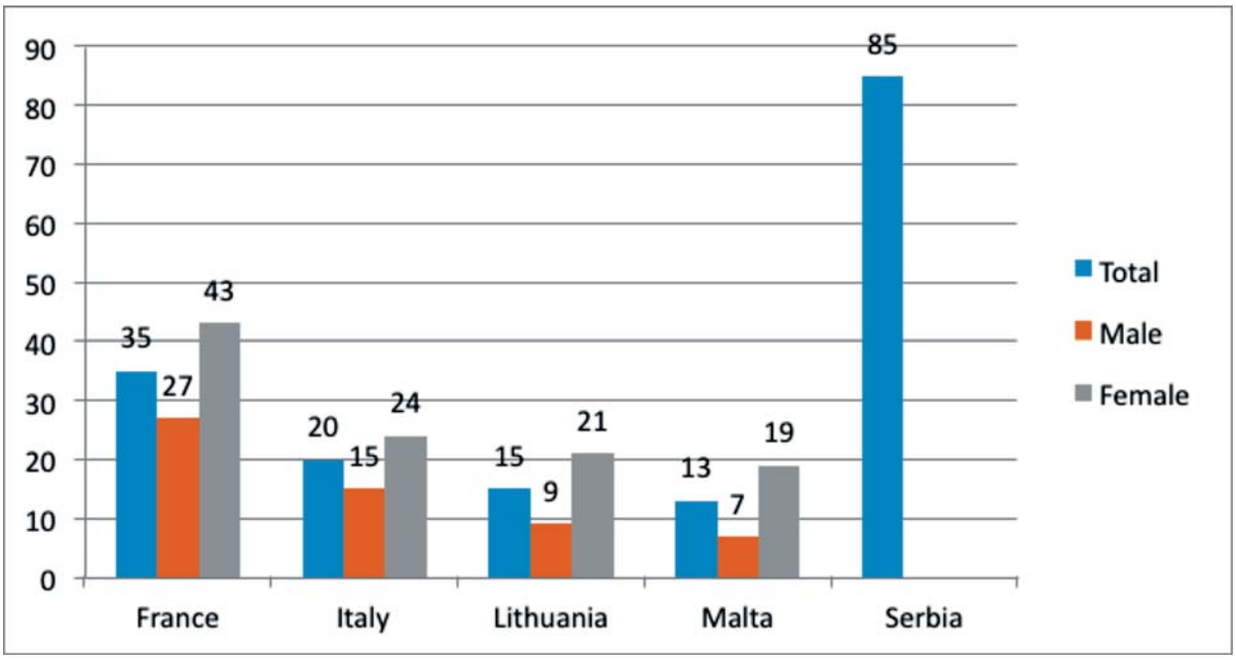
Table 15: Categories of prescription drugs (psychotropics) included in the survey questionnaire by country

	Opioids	CNS Depressants	CNS Stimulants	Other
Cyprus		X		
Czech Republic	X	X		
Egypt	X	X		X
France		X		
Germany	X	X	X	X
Greece	X	X	X	X
Ireland	X	X		X
Israel		X	X	
Italy		X		
Lebanon				
Lithuania	X	X	X	
Malta		X		
Morocco	X	X	X	X
Netherlands		X		
Serbia	X	X	X	X
Tunisia				
Wales	X	X	X	X

3.3.3 Rates of Use of Prescription Drugs

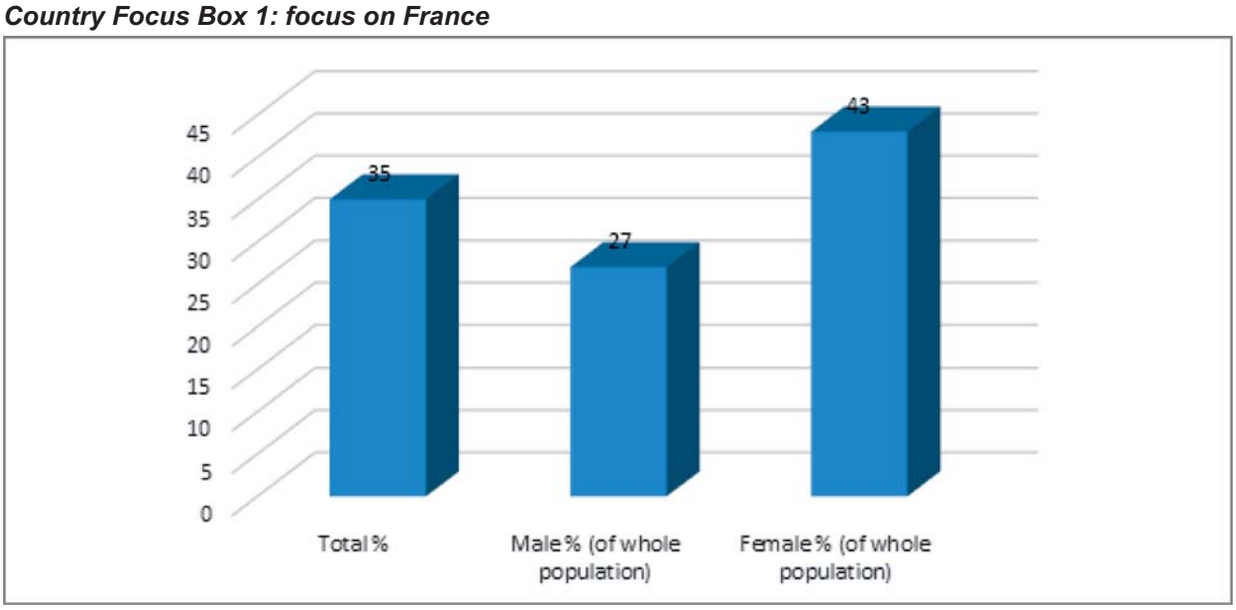
The survey questionnaire requested data on prescription drug use at three intervals: lifetime, last 12 months and last 30 days

Diagram 3: Reported rates of use of prescription drugs (psychotropics) in lifetime in the population by gender



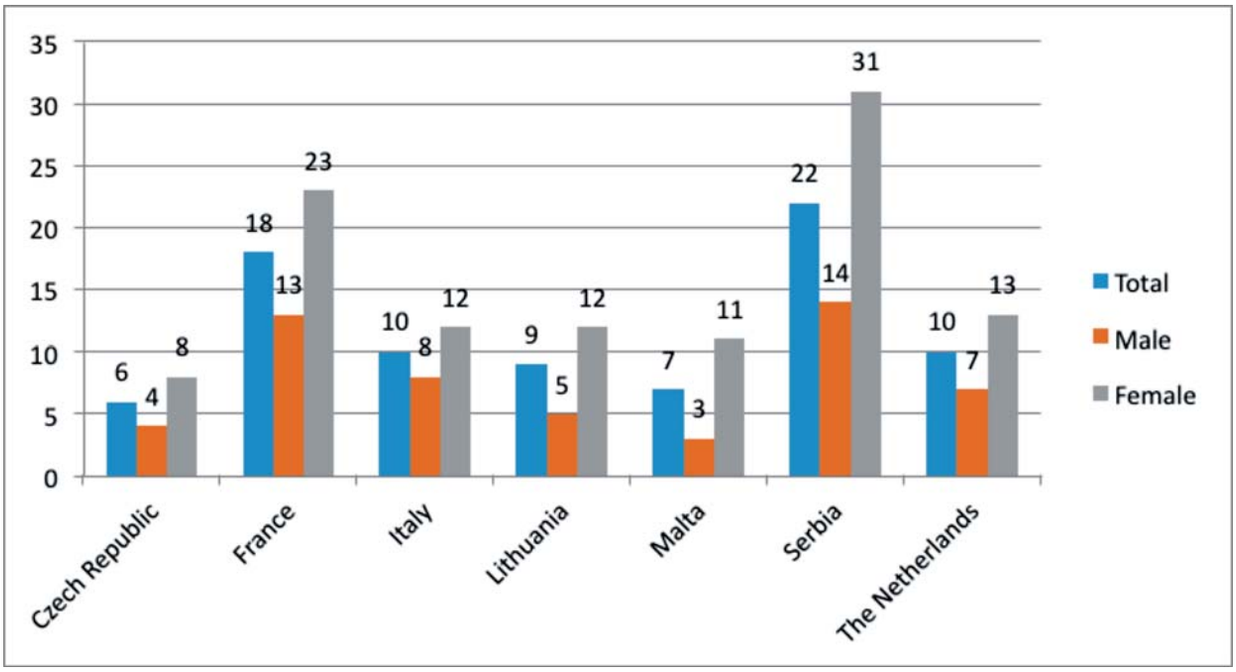
In those countries reporting on the use of prescription drugs in lifetime, it is immediately apparent that female use surpasses that of males in all countries. Serbia reports lifetime use of prescription medication at 85% but was unable to provide a breakdown by gender. France reports high rates of female prescription drug use at over 40%.

Country Focus Box 1: focus on France



Rates of use of prescription drugs (psychotropics) in lifetime in the population by gender in France

Diagram 4: Reported rates of use of prescription drugs (psychotropics) in the last 12 months in the population by gender



In those countries who reported on the USE of prescription drugs in the last 12 months, it is again apparent that female use surpasses that of males. Serbia and France report higher rates of female prescription drug use over the last year period, with Serbia reporting the highest female rate of prescription drug use in the last 12 months.

Country Focus Box 2: focus on Serbia

The National Survey on Lifestyles of citizens in Serbia (2014)

- Sedatives and hypnotics had been used by **22.4%** of the respondents in the last year (**13.9%** of the men and **21.2%** of the women) with the remarkably higher prevalence in older groups.
- Opioid /based medication (mostly analgesics) had been used by **5.1%** of the respondents in the last 12 months (**4.1%** of the men and **6.1%** of the women).
- The majority of the respondents reported that they obtained the medicines from the pharmacy on prescription.
- The prevalence estimates of intensive and problematic forms of use of sedatives and hypnotics in absolute numbers after extrapolation to the population size were:

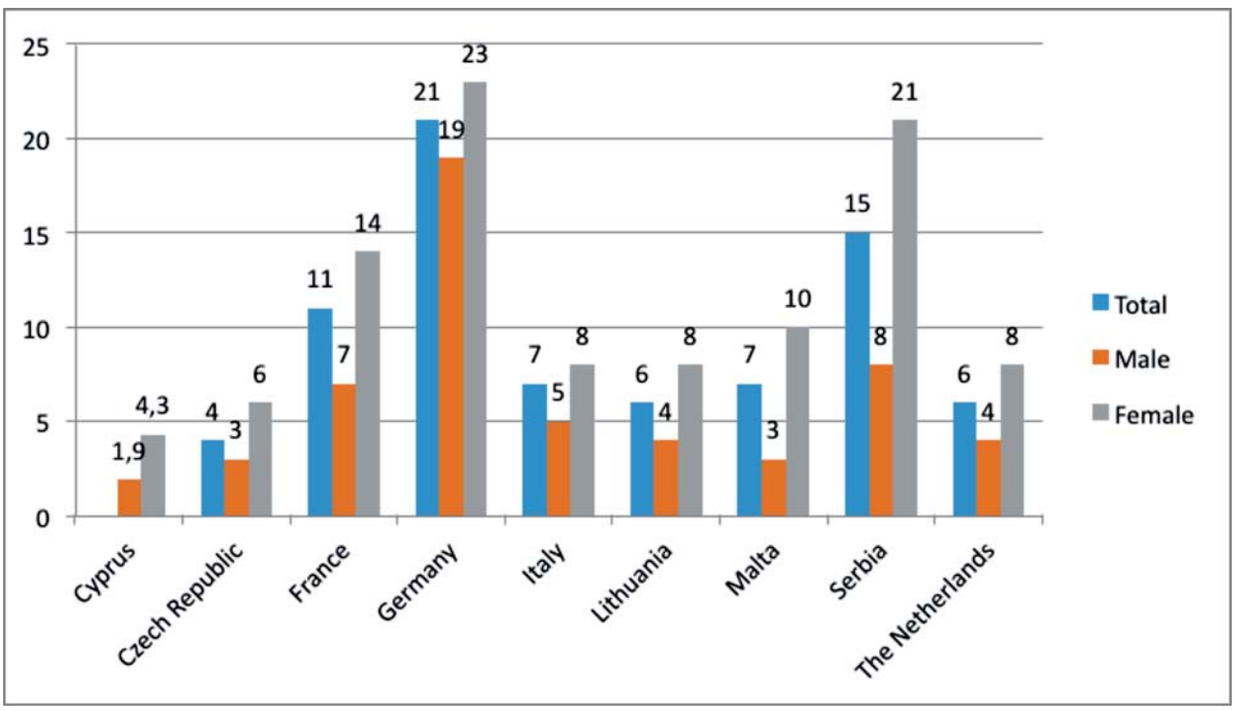
Daily use of sedatives, hypnotics in the last 30 days:

- Males (n=2676) / **51100**
- Females (n=2709) / **155 200**
- Young adults (18-34 years,n= 1819) /14 200
- Total population (18-64 years,n= 5385) /205 600 (182 300-233 700)

Prevalence of intensive and problematic forms of use in percentages were:

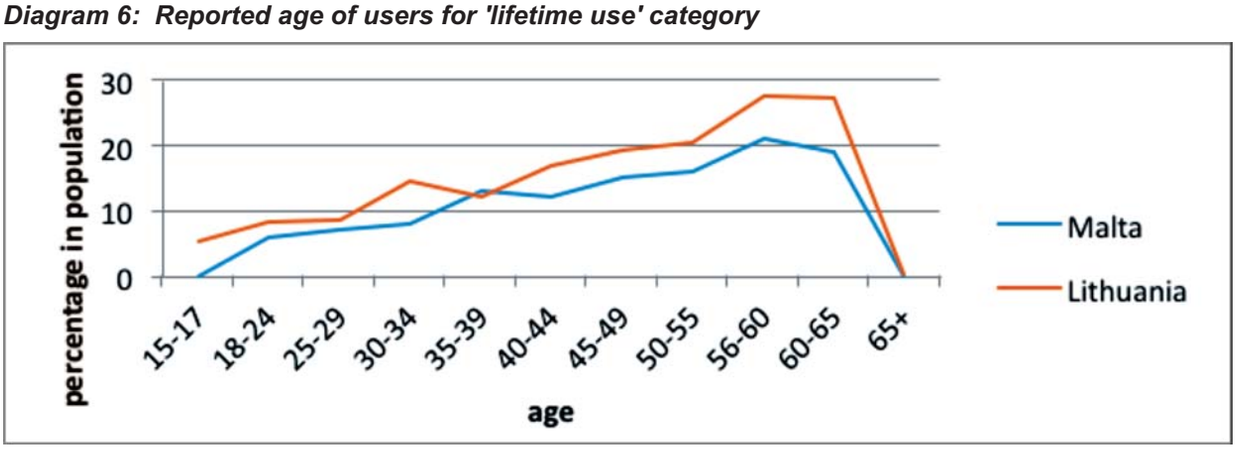
- Males = **2.2%**
- Females: **6.6%**
- Young adults: 0.9%
- Total population: 4.4% (3.9-5.0%)

Diagram 5: Reported rates of use of prescription drugs (psychotropics) in the last 30 days in the population by gender



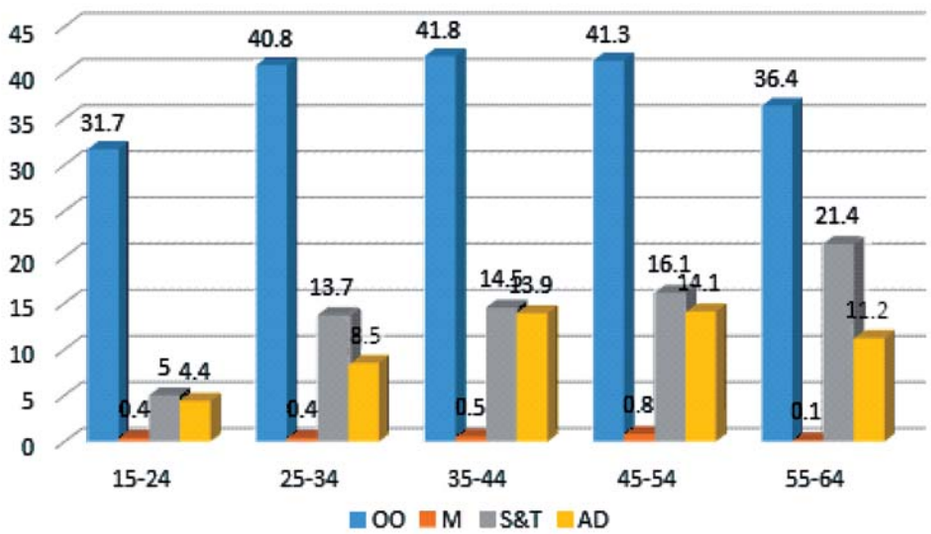
Data submitted by expert respondents for last 30 day prescription drug use shows some consistency among European countries with higher rates for Germany and Serbia. These higher rates may be the result of more inclusive definitions for prescription drugs use and/or the inclusion of a number of categories in the general population surveys in these countries. So for example Germany and Serbia measure all three major categories of prescription medication, ie, opioids, CNS depressants and CNS stimulants, while Malta on the other hand only reports for the use of CNS depressants. This highlights the importance of consistent monitoring through the inclusion of the same categories of prescription drugs across countries in Europe to allow for comparable data. Despite this limitation, the data submitted clearly indicates that in ALL countries female prescription use surpasses that of males.

Diagram 6: Reported age of users for 'lifetime use' category

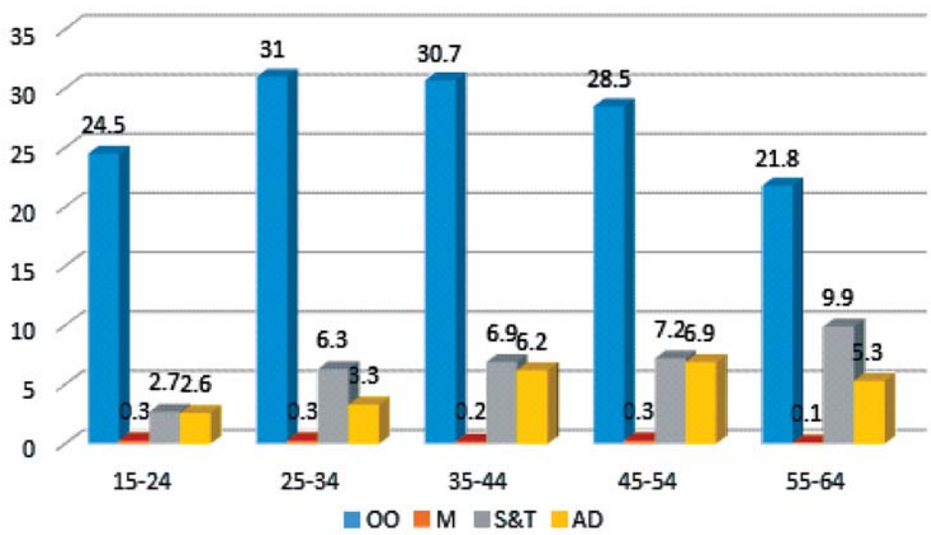


The only available data on this is for Malta and Lithuania. The trend is similar for both countries with older people being more likely to have ever used a prescription drug. Ireland has presented some interesting insights on age categories and they are included separately since different age ranges were used. The reports on the 2010/2011 general population drug use prevalence survey provide data by age and by socioeconomic status but they do not cross-tabulate this data with data on gender.

Country Focus Box 3: focus on Ireland
Reported age of users for 'lifetime' in %



Country Focus Box 4: focus on Ireland
Reported age of users for 'last 12 months' in %



Legends for Focus Boxes 3 & 4:

Blue (OO) = Other Opioids
Orange (M) = Methadone and physeptone
Grey (S&T) = Sedatives and Tranquillisers
Yellow (AD) = Anti-Depressants

Diagram 7: Reported age of users for 'last 12 months' category

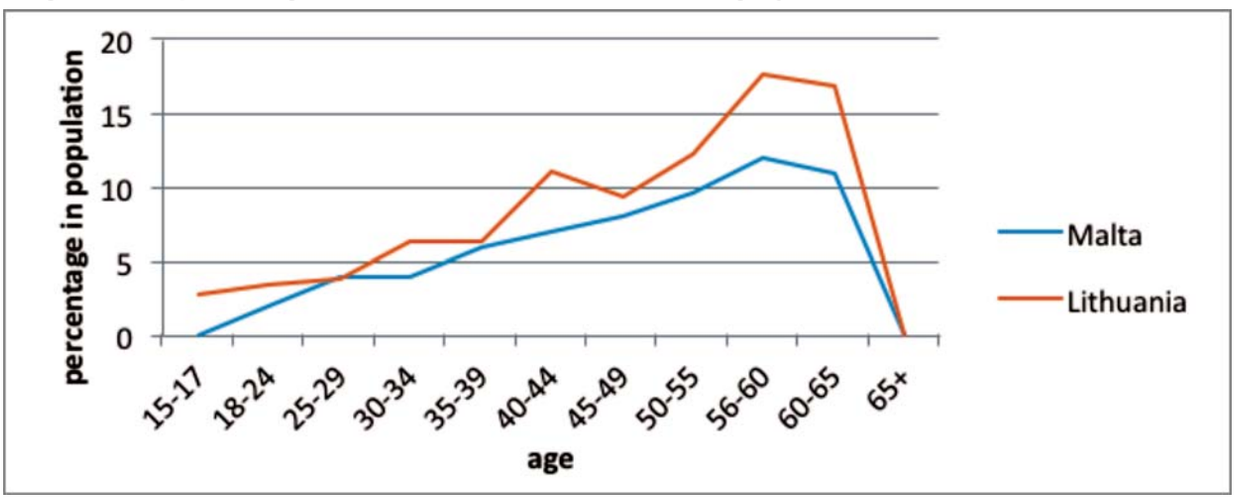
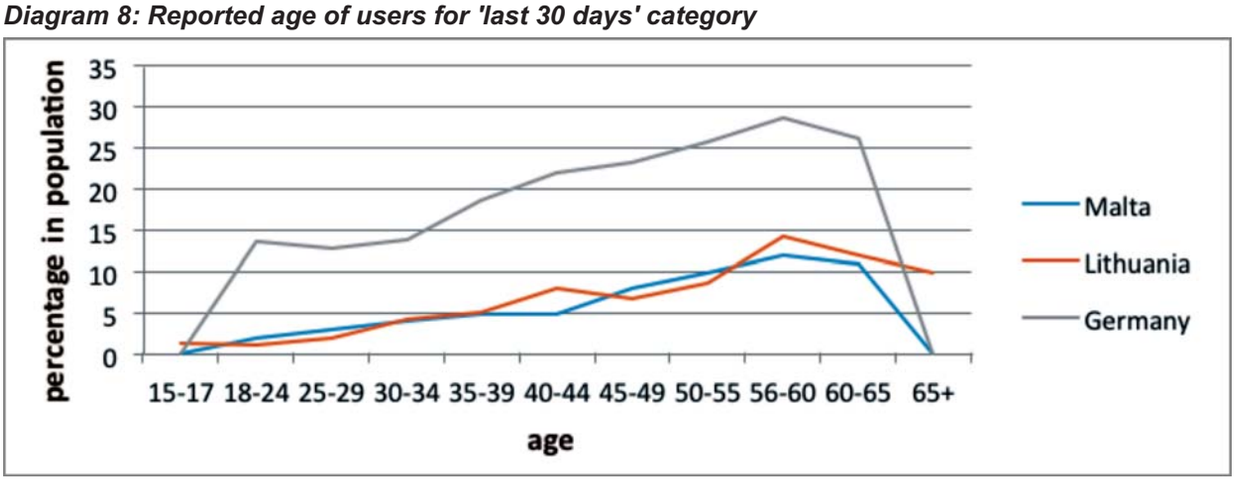


Diagram 8: Reported age of users for 'last 30 days' category



The same trend is evident for use in last 12 months and last 30 days. Those in the 50 to 65 age group are more likely to have reported use in the last year.

The data for Czech Republic (CR) (which uses different age brackets) shows a similar trend.

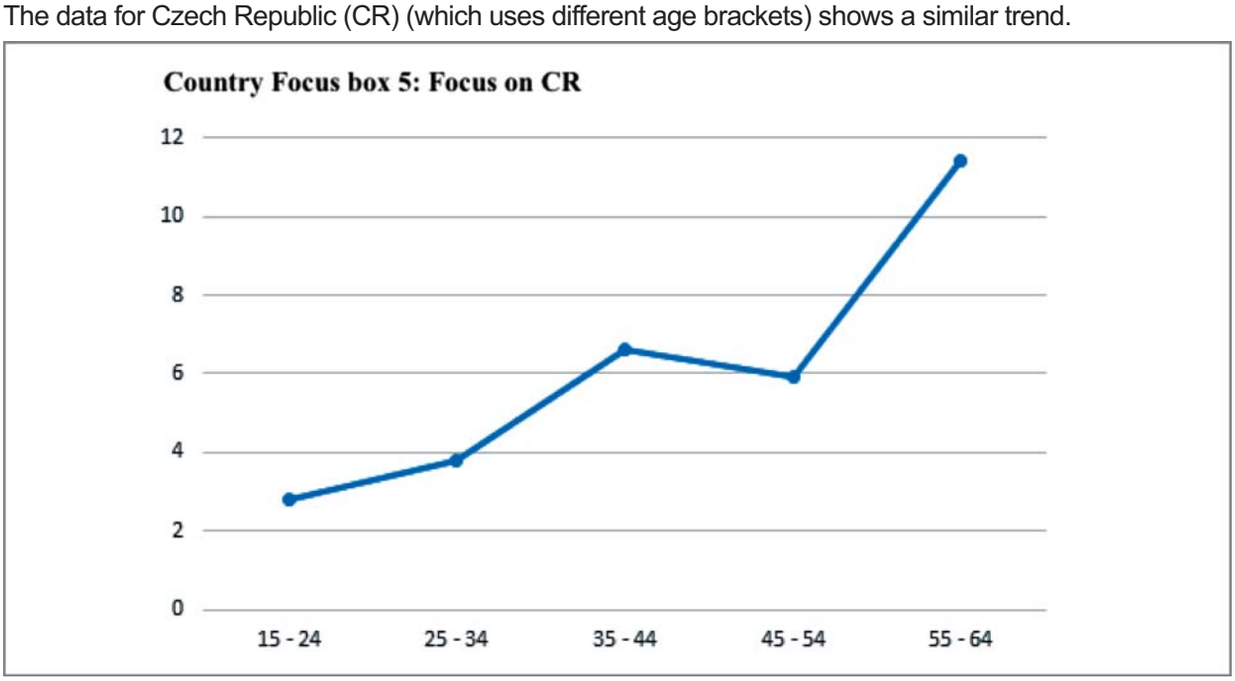
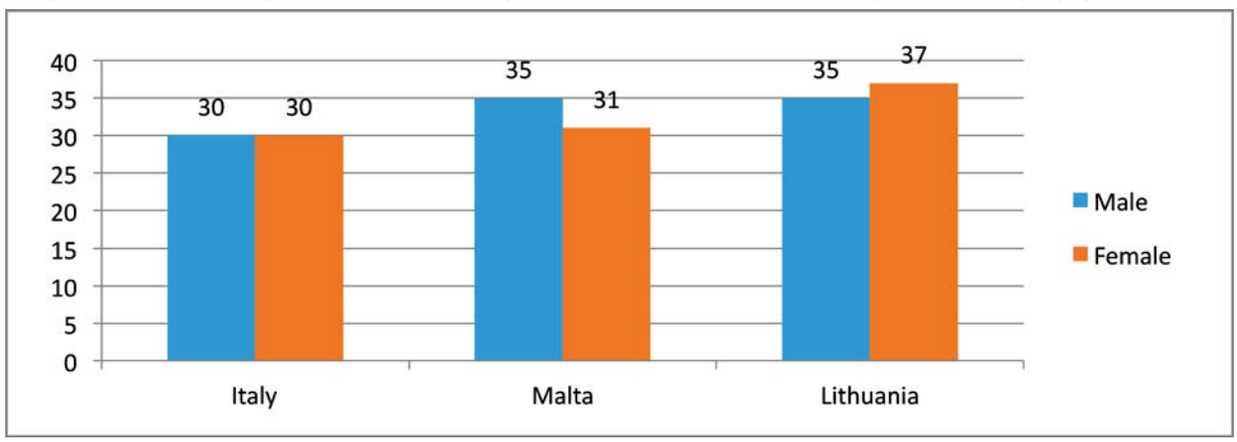


Diagram 9: Median age of first use of any prescription medication (psychotropics) by gender



The identification of the age of first prescription drug use has important implications for prevention. The diagram on this clearly indicates that the 30's are a period in one's lifetime where it becomes more likely that one is prescribed a psychotropic medication. Gender differences are minimal in this regard.

Diagram 10: Type of drug used by gender

Diagram 10 a

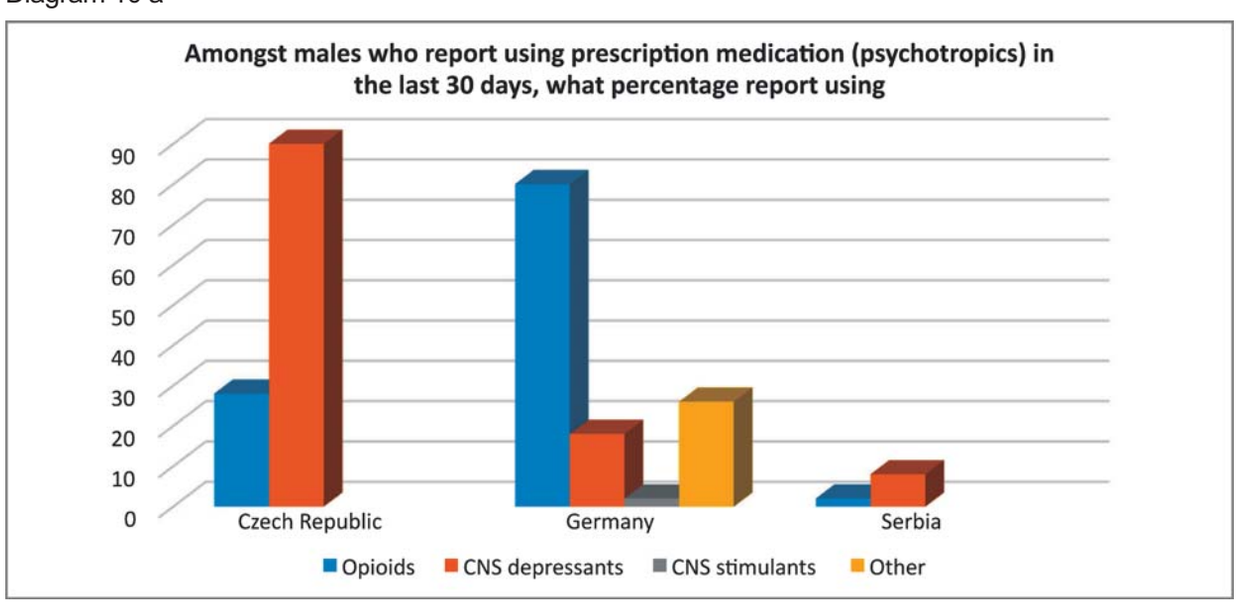
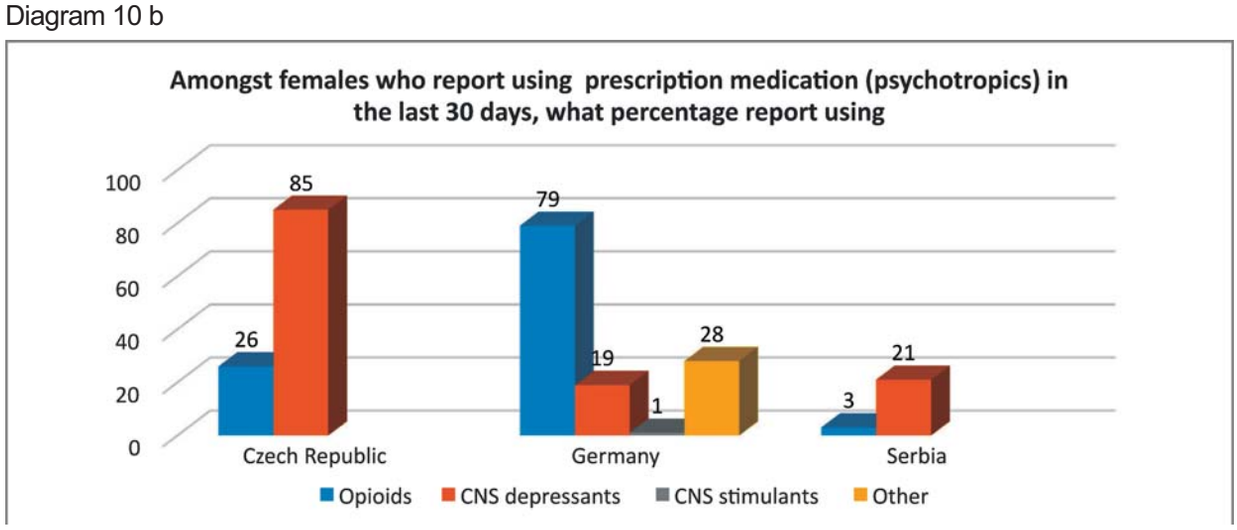


Diagram 10 b



For the few countries who were able to report on this important issue because their General Population Surveys ask for information about more than one class of prescription drugs, we can see that few gender differences are evident. The literature review has highlighted how gender is not predictive in the same direction across different drug categories; therefore the variation in prescription drug misuse must be evaluated according to specific types of drugs (Dollar & Ray, 2013).

Expert respondents were asked to document **gender specific associations** of prescription drug use with a number of variables such as age, employment and socioeconomic status and to document perceived trends over time. 11 countries provided such a detailed analysis, the content analysis of which provides some interesting insights into gender issues in relation to use of prescription medication.

In the Czech Republic, the National Survey on Substance Abuse in 2012 indicated that use of both opioid analgesics/painkillers and sedatives, anxiolytics, hypnotics is much more prevalent among females, across all age groups.

In France, data of Baromètre Santé in 2010 shows an increase of the prevalence of persons using psychotropics with age, then a stabilization, and even a diminution for the age group older than 75 years. Over lifetime, this increase **is very significant among women for the 26-44 age group,** then stabilizes around age 55-64, while the increase in males is continuous and slower. Data from the Baromètre Santé (2010) have been compared with data from 2005. Whereas the use in lifetime seems to be stable, use in the last 12 months increased, from 15.1% in 2005 to 18.3% in 2010 ((p<0,001). This significant increase can be seen amongst both males and females (13.4 % versus 10.4 % for males; 22.9 % versus 19.7 for females). However, in relation to age, only the 55-75 female age group increase (+ 8 points) seems to be significant, but a lack of power linked to the size of the male sample can't be dismissed. **In France, women use more psychotropics than men: 42.8% versus 26.9 % in lifetime, 21.4 % versus 13.3 % on the last 12 months, and this irrespective of the age group.** Experimentation with psychotropics comes in third position amongst women (after alcohol and tobacco) and in fourth position amongst (after cannabis). Prevalence during the year is relatively high, in particular for tranquillisers (10.4%), followed by sleeping pills (6.3 %) and antidepressants (6.2%). Prevalence of mood stabilizers during the year is 0.7%, neuroleptics is 0.9%. **Whatever the psychotropics group (antidepressant, tranquillizer, hypnotic), their use seems higher amongst females, particularly for antidepressants and tranquillisers; this use increases with age then reduces and stabilizes beyond the 55-64 YO group** [10]**.**

The Netherlands are able to compare trends over time in relation to the use of prescription medication.

For both men and woman, use of tranquillisers and sedatives in the last year and in the last month decreased between 2001 and 2005. In 2001 9.0% of males had used tranquillisers and/or sedatives in the last year, 5.2% in the last month. In 2005 these percentages were respectively 6.1% and 3.7%. In 2001 13.1% of females had used tranquillisers and/or sedatives in the last year, 7,4% in the last month. In 2005 these percentages were respectively 12.4% and 6.3%. In 2009, 2.9% of the Dutch population started to use tranquillisers and/or sedatives (new users). Among men, this percentage was 2.4% and among women 3.3% [11].

The German submission reporting from the 2012 Epidemiological Survey of Substance Abuse (ESA) allows for the identification of some relationships between variables. **Amongst all age groups women show higher prevalence rates than males.** Blue collar workers are more likely to use prescription psychotropics than white collar workers and again rates for women are higher in both groups. The prevalence of prescription drug use by alcohol use (30 days prevalence) and gender show that both men and women who drink alcohol are more likely to use prescription drugs. The prevalence rates for male abstainers were 17% while alcohol drinkers had a prevalence rate of prescription use at 25.4%. 20% of women who don't drink use prescription medication, while 27.9% of women who drink do. Similar trends are apparent for prevalence of prescription drug use by cannabis use (30 days prevalence) and gender and of prescription drug use by cigarette use (30 days prevalence) and gender.

In the German Health Interview and Examination Survey for adults (Studie zur Gesundheit Erwachsener in Deutschland, DEGS) among 18 to 79 year olds, about three quarters (74.4%) of all men and women

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[10] *Beck F., Guignard R., Haxaire C., Le Moigne P., Les consommations de médicaments psychotropes en France, La Santé en action, mars 2014, n° 427, 47-49., drawn up from the Baromètre santé 2010, INPES. Expertise collecive Inserm, Médicaments psychotropes, consommation et pharmacodépendance, Editions Inserm, 2012.*

[11] *Van Rooij, A. J., Schoenmakers, T. M., & Van de Mheen, D. (2011). Nationaal Prevalentie Onderzoek Middelengebruik 2009: kerncijfers 2009 [National Prevalence Study Substance Use 2009: Core Statistics 2009]. IVO: Rotterdam*

state that they used at least one prescription drug. Prevalence is highest among 70–79 year olds (men 94.9%; women 96.3%). **Overall women have a significantly higher prevalence rate (85.4%) than men (63.8%).** In this study 71.8 % of all preparations used were prescribed by a medical doctor. Gender differences in 7-day prevalence of prescription drug use are most pronounced in young and middle aged adults and level-off in the age group above 70 years. **Women have higher prevalence of polypharmaceutic use, except in the oldest age group.** Prevalence of polypharmaceutic use over all age groups stood at 9.9 % for males vs. 13.6 % for females. However, when considering prescribed drugs only, prevalence is only higher for women among those aged 40 to 49 years [12].

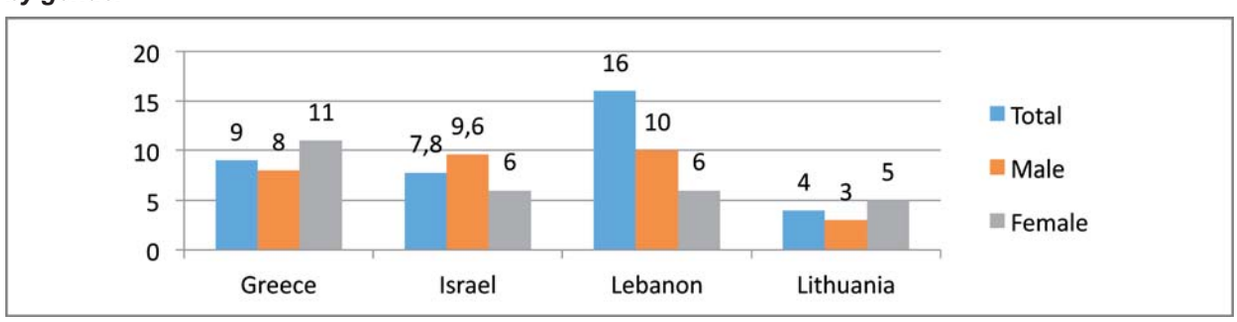
In Lithuania, sedatives/tranquillisers with a doctor's prescription are inclined to be used more by older women, divorced or widowed people, those having a higher education, pensioners and persons with lower incomes. The results of the 2012 GPS, compared to the survey of 2008, show that the prevalence of the lifetime use and last year use of sedatives/tranquillisers with doctor prescription in 2012 **increased significantly among females and did not change among males.** Prevalence of last month use of sedatives/tranquillisers both among males and females did not change in the last 4 years.

In Cyprus 4.3% of women reported using sedatives and/or tranquilizers during the last month in 2012. The percentage for men being only 1.9%. The respective percentages from previous series of the survey (2009) were higher for both males (3.2%) and females (5.5%). The median age of women who were currently using sedatives/tranquilizers was 48 years old (min: 19, max: 64).

In Malta a total of 7% of the entire male cohort interviewed reported ever use of medical drugs, a decrease of 3.4% over the findings of the 2001 report. A slight decrease was also reported in female respondents reporting ever use of such substances with 18.7% positive response compared to the 19.5% reported in the previous 2001 study. Research findings show that use of sedatives and tranquillisers drastically increases with age. The highest percentage of ever users of these substances was registered among respondents aged between 55 and 59 years where 21% of them indicated that they used such substances at least once in their lifetime. In 2001 the most prevalent age was also in the 55-59 year old cohort with 25.5% of positive responses falling under this age bracket. Among life time users of sedatives, 35.6% reported being unemployed and not seeking work, 6.2% reported being unemployed and seeking work, 38% were employed, 2.5% self-employed, while 4.5% reported being unable to work due to disability or illness. Lifetime use of tranquillisers in the ESPAD (European School Survey Project on Alcohol and other Drugs) surveys of 2007 and 2011 report a lifetime prevalence use of such substance at 5% and 3% respectively. In this General Population Survey, lifetime use is registered at almost 5% among those aged 18 to 24 years. These figures show an element of consistency between data reported at school age and the data reported in this GPS. Worthy of note is that those young people taking part in the 2007 and 20011 ESPAD surveys, in 2013 would fit between the 18-24years age cohort of the General Population Study conducted in 201

3.3.4 Rates of Non Medical Use of Prescription Drugs

Diagram 11: Rates of non-medical use of prescription drugs (psychotropics) in lifetime in the population by gender [13]



[12] *Knopf, H. & Grams, D. (2013). Arzneimittelanwendung von Erwachsenen in Deutschland. Ergebnisse der Studie zur Gesundheit Erwachsener in Deutschland (DEGS1) [Medication use of adults in Germany. Results of the German Health Interview and Examination Survey for Adults (DEGS1)]. Bundesgesundheitsblatt, 56, 868–877*

[13] *Data from Israel on non medical use does not apply to the general population. All such data is from a 2009 survey by the Israeli anti-drug authority in adults aged 18-40.*

Diagram 12: Rates of non-medical use of prescription drugs (psychotropics) in the last 12 months in the population by gender

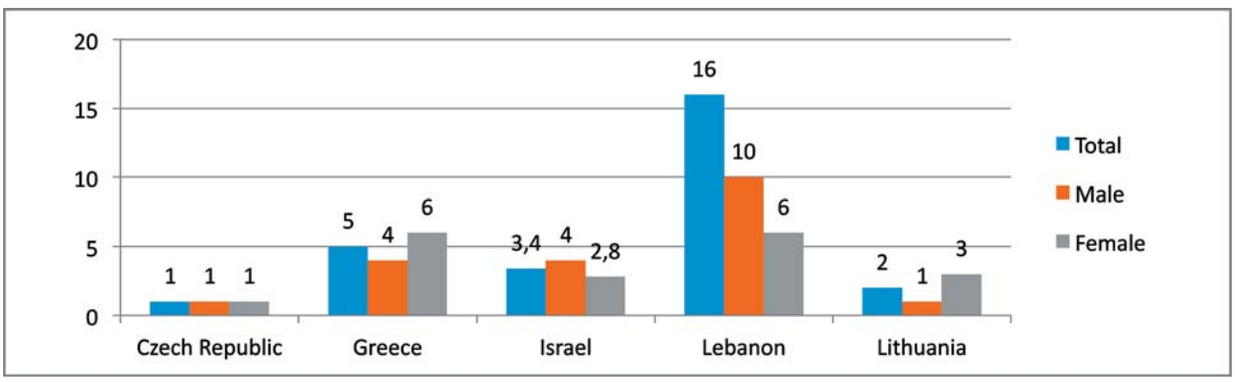
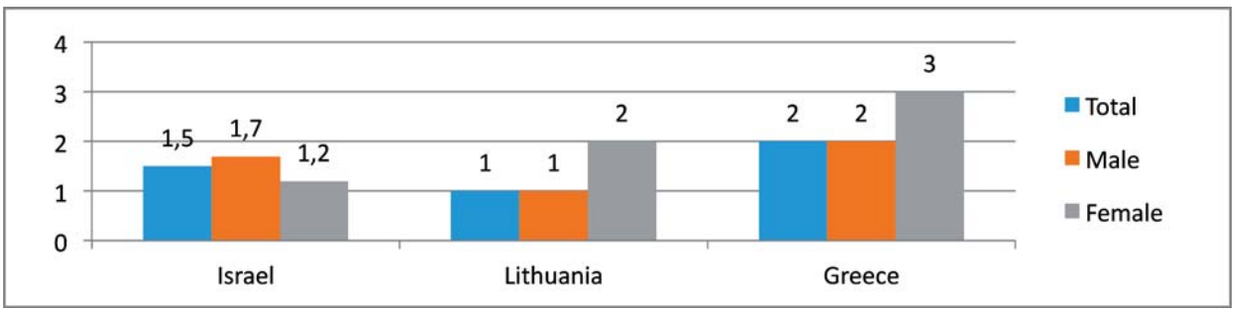


Diagram 13: Rates of non medical use of prescription drugs (psychotropics) in the last 30 days in the population by gender



While rates for prescription drug use have been shown to be clearly higher for women across most age groups and across time periods, the picture for NMUPD is somewhat less clear. While not many countries reported on NMUPD, the data in the diagram above shows that Greece and Lithuania register higher levels of NMUPD for females while the opposite is true for Lebanon and Israel. More traditional gender roles in Mediterranean countries abiding by the codes of honour and shame (Clark, 2012) could account for this difference.

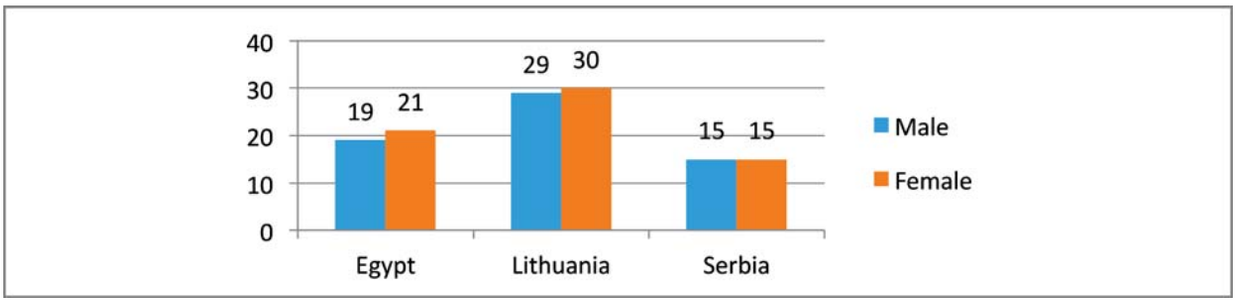
Country Focus Box 6 FOCUS ON ISRAEL

Rates of NMUPD	lifetime			last 12 months			last 30 days		
	male	female	Total	male	female	Total	male	female	Total
Stimulants	5.3	1.2	3.1	1.6	0.3	2.9	0.7	0.1	0.5
Depressants	6.6	5.6	6.1	3.2	2.9	2.9	1.6	1.2	1.3
ALL	9.6	6	7.8	4	3	3.4	1.7	1.2	1.5

The Egyptian submission data are solely on non-medical use of prescription drugs (no data on use of prescription drugs) and therefore must be presented separately. **In Egypt,** the Lifetime Prevalence of Alcohol and Substance use survey in Egypt (2006) reports that lifetime prevalence of substance use in males is 12 times higher than females (P < .0001). This study sample included a disproportionately higher (70%) representation of males raising the population prevalence before correction. The prevalence of substance use is 13.2% in males and 1.1% in females. The expert respondent for Egypt reports that substance use in Egyptian women is uncommon. The use of entry substances such as tobacco in women is associated with social stigma. In addition, there is a significant degree of restriction on the movement of women. Despite this low prevalence, the trend of substance abuse in Egyptian women is rising. A 3.4% of cases in this study were female, in comparison with 2.3% in a study done on 1996. The age for drug abuse initiation was 15-19 years of age and the peak for addiction severity was at age 25-45. Lower or no education was associated with more drug abuse (19% primary education, 22% read and write, and 15% illiterate). With the exception of people who can just read and write without further education, there is a clear inverse relation between degree of education and the prevalence of substance use (P < .0001). There is also a significantly higher prevalence of substance use in tradesmen and skilled and

unskilled workers compared with professional and clerical workers (P < .0001). Drug abuse and addiction are more common among those whom father (17%) or mother (12.5%) was travelling. Drug abuse and addiction are more common among those whose father (21.5%) or mother (23%) left home. Substance use is significantly more prevalent in separated, widowed, or divorced individuals (18.46%) compared with those who are single or married (P < .0001). There was more psychiatric comorbidity among drug users (35.9%)

Diagram 14: Median age of first non-medical use of prescription drugs (psychotropics) by gender:



In accordance with the abundant literature on the subject, the initiation into NMUPD is marginally later for females than it is for males.

Diagram 15: Type of drug reported amongst males for non-medical use of prescription drugs (psychotropics), in percentages

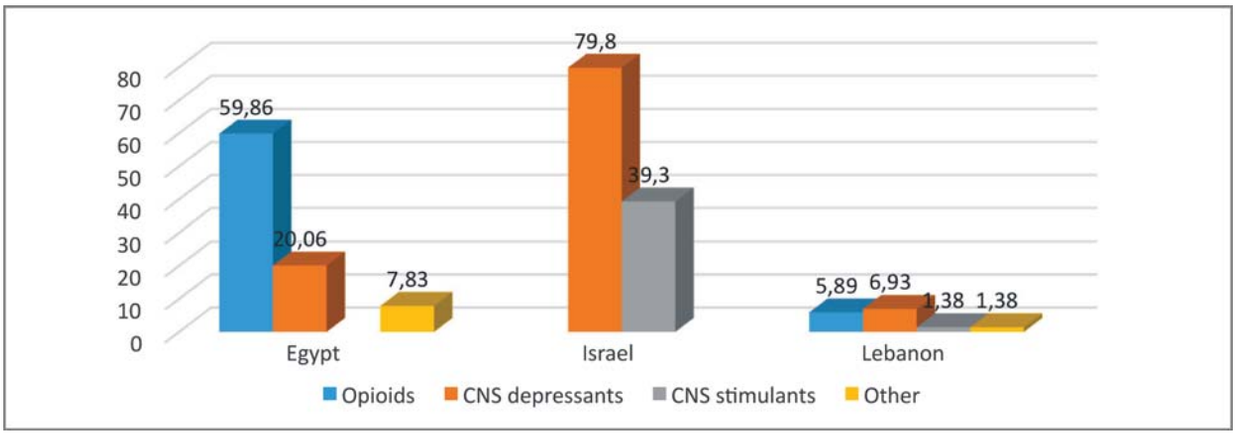
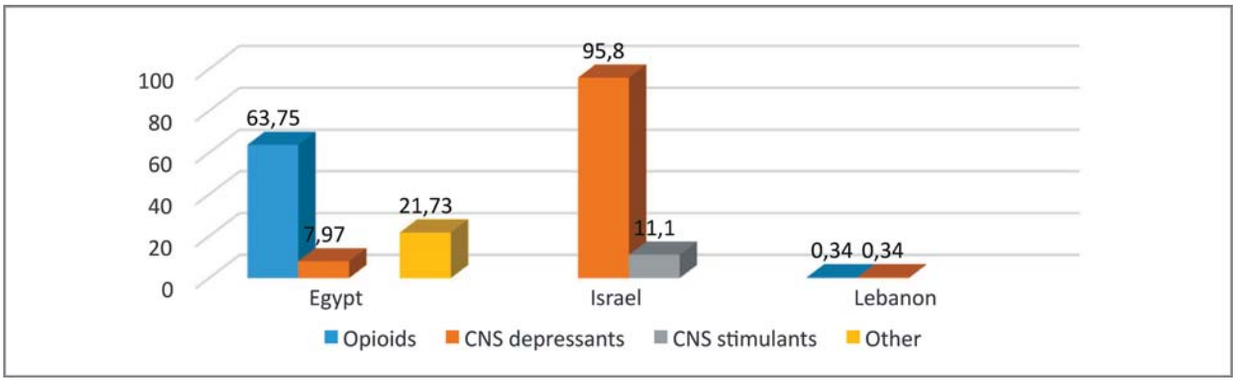


Diagram 16: Type of drug reported amongst females for non medical use of prescription drugs (psychotropics), in percentages



The data does not allow for any extrapolation of differences in type of drug according to gender. The literature review has indicated that this is an important area of research and should be given further attention.

Expert respondents were also asked to document any **associations** of the non-medical use of prescription drugs (psychotropics) with a number of variables such as educational attainment, age, leisure patterns, other substance use, unexplained pain, mental health difficulties, family dynamics etc. observed in the survey they are reporting from or any other relevant study while also noting any perceived trends over time.

In Serbia, results from the National Health Survey (2006) show that sedatives taken without consultation with a physician occurs in 4.6% of the population (hypnotics 1.8% and 26.0% analgesics.). Women often use on their own initiative all kind of drugs (**33.5%**) compared to men (**25.1%**). NMUPD is more common in urban areas. Population between 45 and 54 years of age significantly more than the average population takes sedatives. Also, sedatives are more likely to be used by wealthier residents. Individual use of prescribed drugs is widespread among persons younger than 55 years old. Compared to the situation in the year 2000, sedatives are used more (13.4 compared to 13.7 in 2006) (National Health Survey.2006.)

In Egypt, four hundred and fifty seven substance abuse patients who attended an outpatient clinic in the Neuropsychiatry Department in Tanta University Hospital in the period from June 2006 to June 2009 were classified into two groups according to gender. The 2 groups were assessed using DSM IV semi-structured interview and compared together regarding; Age, age of onset of drug use, duration of abuse, educational level, occupation, marital state, first drug used, number of abused drugs, route of administration, possible risk factors, motivation for asking for help and comorbid psychiatric conditions.

- The duration of addiction was found to be significantly higher among males (8.67±3.15 years) compared to females (5.60±1.74 years).
- The duration of addiction was found to decrease with increased educational level. There was no significant difference between males and females in that respect.
- Addicts who ever married were found to have significantly higher duration of drug use of 13.05±6.63 compared to 7.37±4.53 among single addicts.
- In males, the prevalence of drug dependence was the highest among skilled workers (36.05%), unemployed (22.25%) and professionals (18.18%), while the lowest percentage was among manual workers (5.95 %), employees (8.46%), and students (9.09%).
- In females the highest percentage was among the students (50.75%) followed by unemployed (36.23%) and manual workers (10.77%), while the lowest percentage was among skilled workers (1.44%), employees (5.07%), and professionals (5.79%).
- The majority of studied addicts were current smokers (96.86% in males and 92.75% in females).
- Most of the females are cigarette smokers, 5.18 % were shisha smokers, but only 14.82% smoked cigarettes and shisha. Among males, bhang and hashish ranked first (64.89%) then opiates (cough syrups 35.10% and opiates, 25.39%), followed by analgesics (24.76%) and then alcohol (24.45%).
- In females, analgesics ranked first (52.89%) followed by anticholinergics (21.73%), cannabis (16.66), and cough syrups (10.86%). **Gender differences showed that females use more analgesics (mostly Tramadol 52.89%) followed by anticholinergics (21.73%) then volatile substances (2.89 %).** Other drugs were less used than males.
- In males, the most common motive for initiation of drug abuse was found to be peer pressure which was reported by 36.67% followed by seeking pleasure (20.06%), improve mood (19.12%) and improve sex and show masculinity (18.18%).
- In Females, the most common motives for initiation of drug abuse was found to be family troubles and sexual abuse (31%), followed by mood improvement (29%) followed by seeking pleasure (13%) and curiosity (13%).
- The majority of studied addicts were abusing more than one drug (84.6%) and more than one half were abusing three or more drugs (53.2%).
- In females, abuse of more than one drug was found in 53% which is significantly less than males. The most common place for drug intake was found to be home (87%) followed by gathering of friends (61%).
- Males showed significantly more trials for treatment than females. The main motives for seeking treatment trial in males were found to be family troubles (17.24%), dissatisfaction with being addict (16.3 %), financial troubles (15.98%), work troubles (12.53%) and health troubles (11.28%).
- In females, the main motives for seeking treatment trial were found to be, Family troubles (23.1%), Health troubles (18.11%), behavioral and psychological disturbances (15.94%), Financial troubles (15.21%), followed by other factors.
- Depressive symptoms are common in both males (31.03 %) and females (39.85%).
- Personality disorders were the most common comorbid psychiatric disorder in females, (26.81%) followed by major depression (26.08%) followed by anxiety disorders (13.76%) and lastly by psychotic disorders (4%) and bipolar disorder (2.17%).
- In males; personality disorders were the most common comorbid disorder (35.10%) followed by anxiety disorders (31.03%), major depression (15.04%) and psychotic disorders (6.58%).

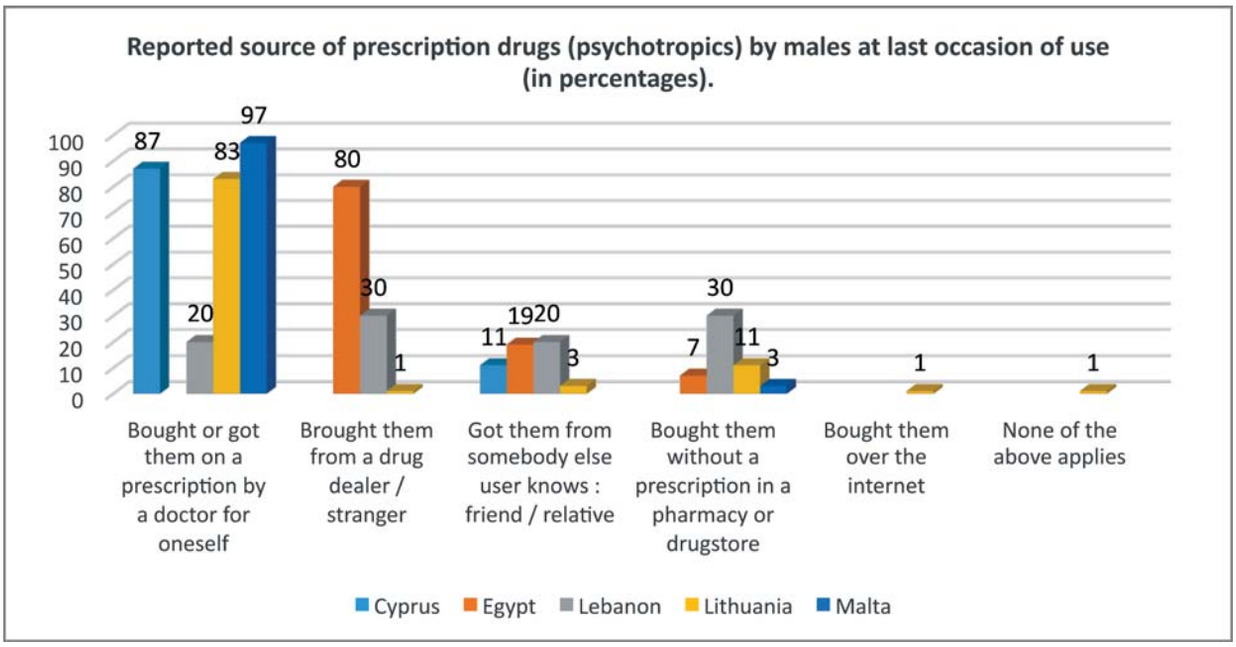
- Major depression was more prevalent in females than males, while anxiety disorders were more common in males than females (P<0.05).

In Lithuania, sedatives/tranquillisers without doctor's prescription are inclined to be used more:

- at least once in their life by: older women (aged 45-64), persons with high education, divorced/widowed people, unemployed
- in the last year: older women (aged 55-64), divorced/widowed person, unemployed
- in the last month by 45-50 year old unemployed women

In Wales a study on prescription drug misuse among university staff and students was conducted to determine the prevalence and nature of prescription drug misuse among this population in the UK. In 2009 an online survey regarding NMUPD was undertaken among 1614 students and 489 staff in a Welsh university. The prevalence of prescription drug misuse was 33% among students and 24% among staff members pain relievers followed by sedatives and sleeping aids were most commonly used. Prescription medication was misused in order to gain therapeutic relief but also 'to get high'.

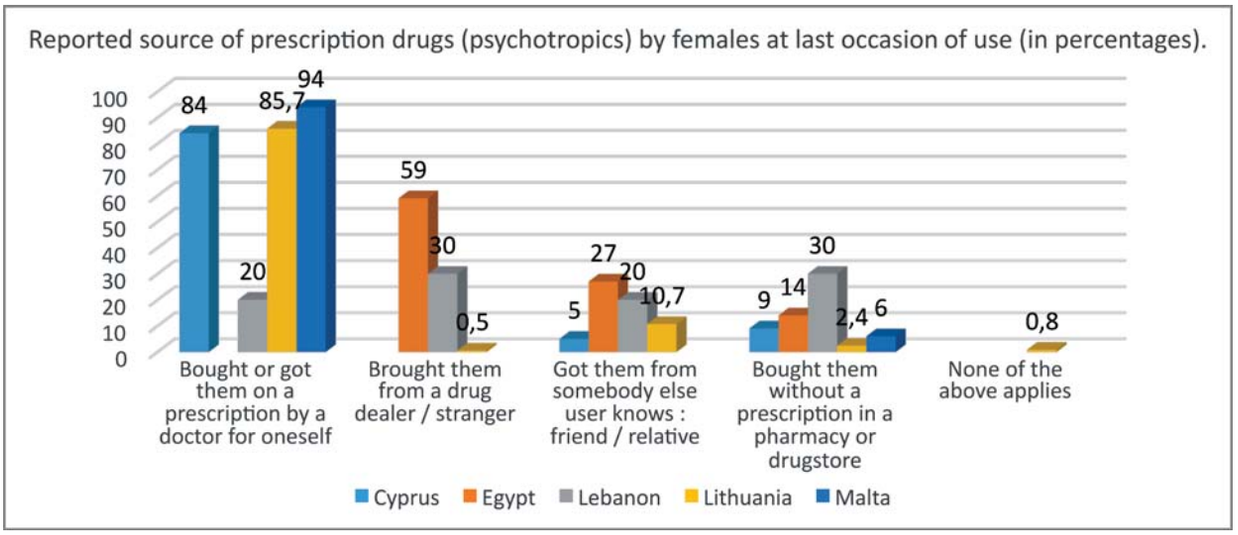
Diagram 17: Reported source of prescription drugs (psychotropics) by males at last occasion of use



	Cyprus	Egypt	Lebanon	Lithuania	Malta
Bought or got them on a prescription by a doctor for oneself	87		20	83	97
Brought them from a drug dealer / stranger		80	30	1	
Got them from somebody else user knows : friend / relative	11	19	20	3	
Bought them without a prescription in a pharmacy or drugstore		7	30	11	3
Bought them over the internet				1	
None of the above applies				1	

The diagram above clearly indicates that in the countries reporting for source the most common source of prescription medication for males is a licit one (from a doctor), followed by 'from a friend or a relative' indicating the relative ease of diversion. The Egyptian data, which is exclusively about NMUPD, indicates that in Egypt therefore that those who use drugs non medically are likely to get them from a drug dealer. The trends are similar for females.

Diagram 18: Reported source of prescription drugs (psychotropics) by females at last occasion of use (answer in percentages please).



	Cyprus	Egypt	Lebanon	Lithuania	Malta
Bought or got them on a prescription by a doctor for oneself	84		20	85.7	94
Brought them from a drug dealer / stranger		59	30	0.5	
Got them from somebody else user knows : friend / relative	5	27	20	10.7	
Bought them without a prescription in a pharmacy or drugstore	9	14	30	2.4	6
None of the above applies				0.8	

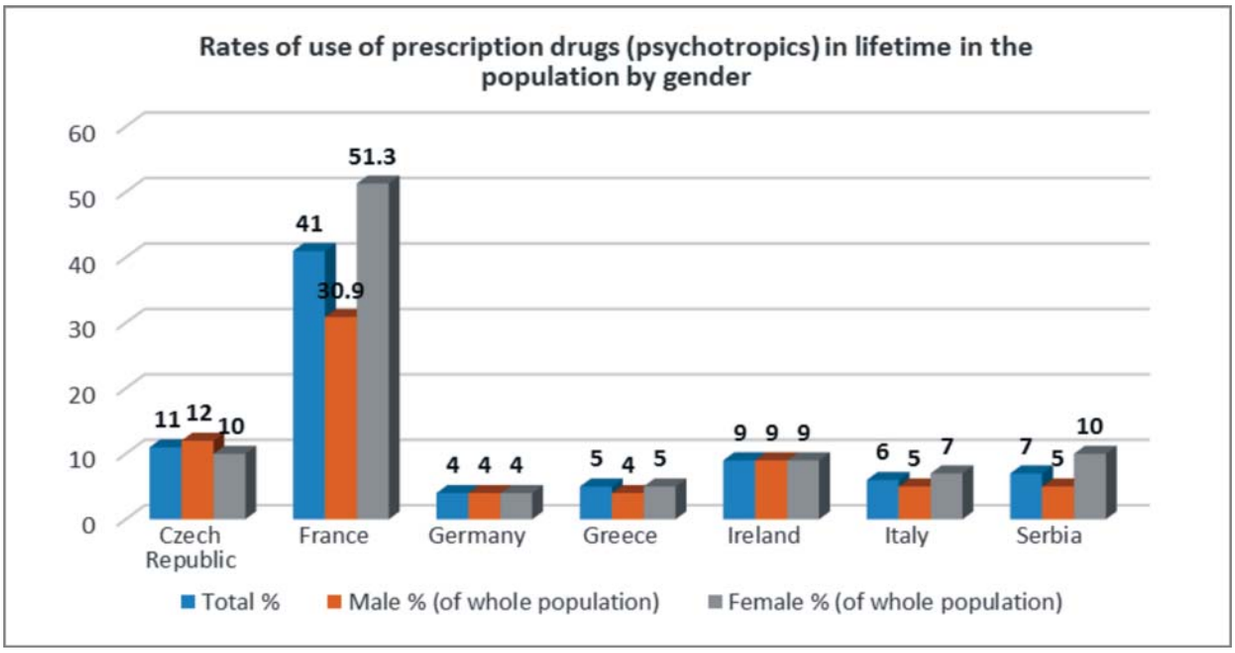
3.3.5 Youth Surveys

Table 16: Categories of prescription drugs (psychotropics) included in the survey questionnaire

	Opioids	CNS Depressants	CNS Stimulants	Other
Cyprus		X		
Czech Republic		X		
Egypt				
France		X	X	X herbal medecines
Germany		X		
Greece		X		
Ireland		X		
Israel			X	
Italy		X		
Lebanon				
Lithuania				
Malta		X		
Morocco	X	X	X	X
Netherlands		X		
Serbia	X	X	X	X
Tunisia	X	X	X	X

As with general population surveys amongst adults, youth surveys are more likely to include items on CNS depressants rather than any other category of prescription drug. The literature review has highlighted how the use of CNS stimulants and opioids are becoming increasingly popular among young people in the US. This has important implications for the future monitoring of NMUPD in the youth population in Europe and the Mediterranean region.

Diagram 19: Rates of use of prescription drugs (psychotropics) among the youth population in lifetime in the population by gender



There are no clear gender differences for prescription drug use in lifetime among young people in the countries reporting data for this, with the exception of France where females are more likely to have ever used a prescription drug.

Country Focus Box 7: Focus on France

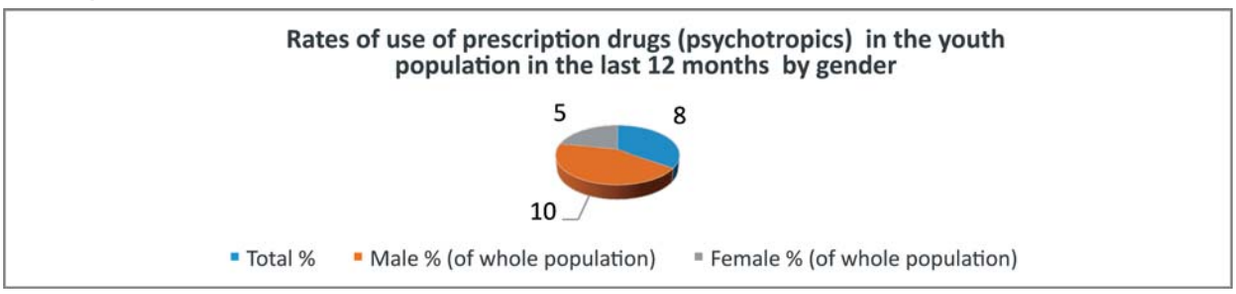
Since 2008, the questions of the Escapad studies have been changed to identify precisely the prescription drugs used: tranquillisers, antidepressants, sleeping pills, neuroleptics, mood stabilizers, stimulants and herbal medicines. At age 17, 41% have used at least one of these drugs in lifetime, versus 44,6% in 2008. The distribution by prescription drugs is:

- herbal medicine (30.3 %),
- tranquillisers (15 %),
- sleeping drugs (10.7 %)
- antidepressant (5.6 %)
- mood stabilizers (2.2%)
- neuroleptics (1.7%)
- psychostimulants (1.3%).

The use concerns more often girls than boys: 23.1% for tranquillisers (vs 13.9%); 17.1 % for sleeping pills (vs 12.1%); and 9.6% for antidepressant (vs 4.8%). The only drug experienced more often by boys is psychostimulants like Ritalin (1.7% vs 1%).

Among the users in the year of one of those prescription drugs, 55 % obtained it the first time with a prescription, 30 % from their parents, 3 % from a friend, 12 % have accessed it from another source.

Country Focus Box 8: Focus on Israel



Israel was the only country with data available for this question

Country focus box 8.1: Focus on Lebanon: MEDSPAD

"Awareness and Practices Related to Addictive Substances among Schoolchildren in Lebanon in 2008".

Relevant findings from this study include:

- Sample size: 1097 school-aged children
- Girls: 54%, Boys: 46%
- Age range: 12-19 years
- Mean age: 14.6 years

9.8% of the sample (97 persons) reported that they knew someone who uses tranquillisers without a medical prescription.

8% of the sample reported having friends who mixed alcohol and tranquillisers at various degrees.

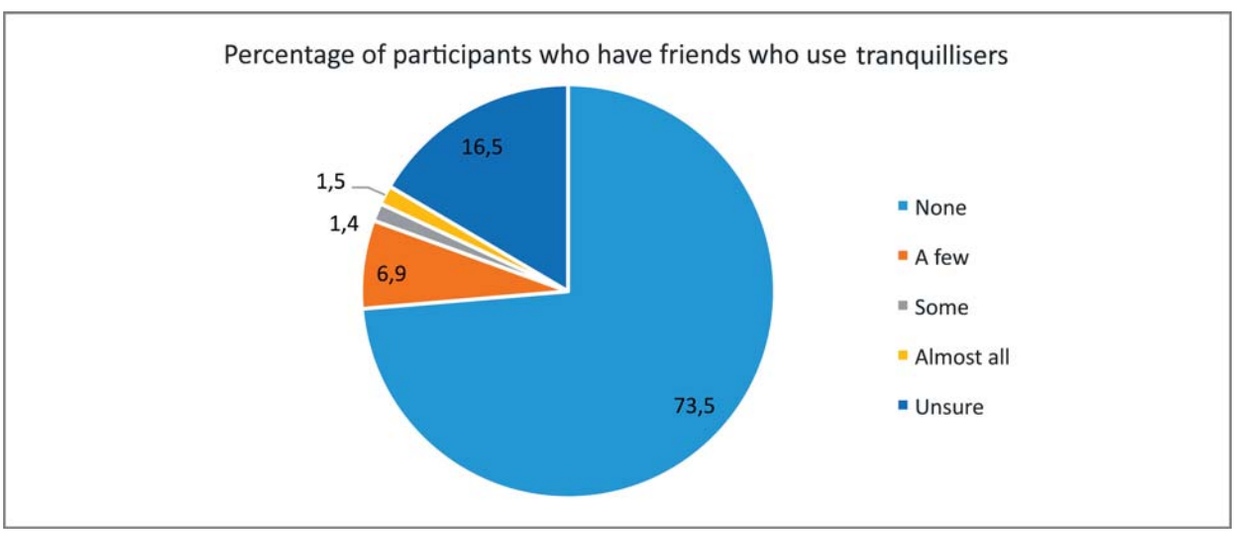
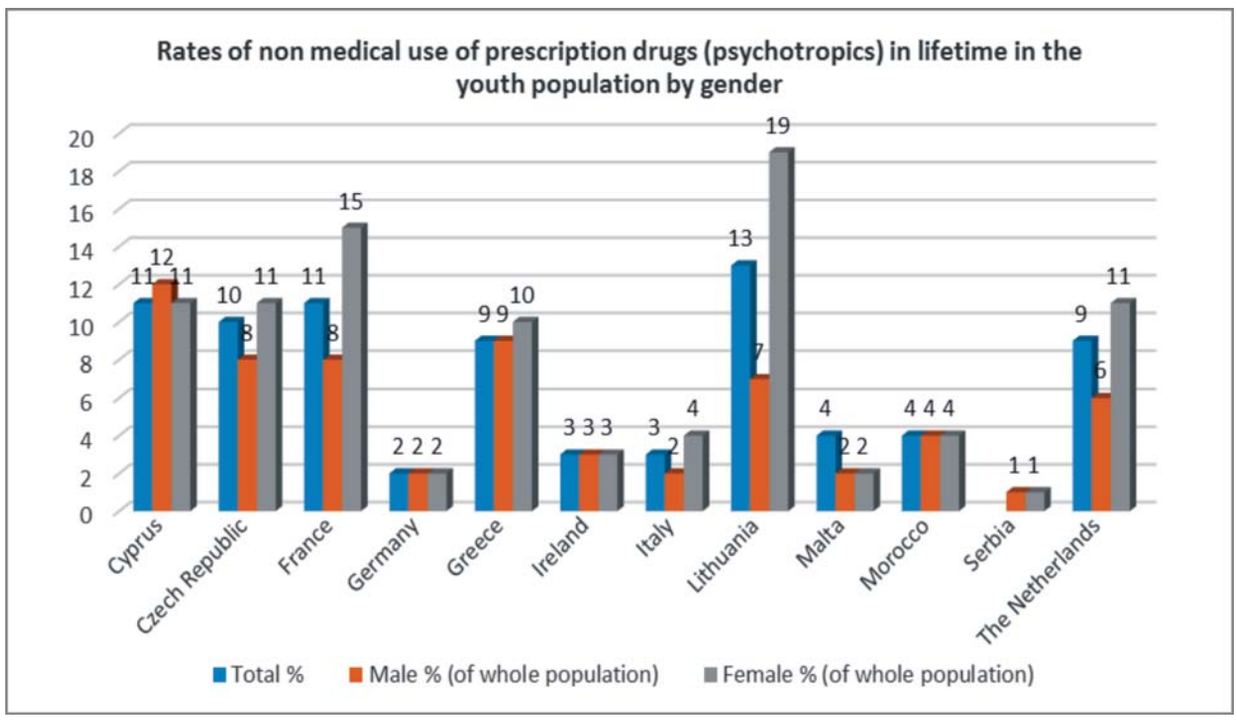
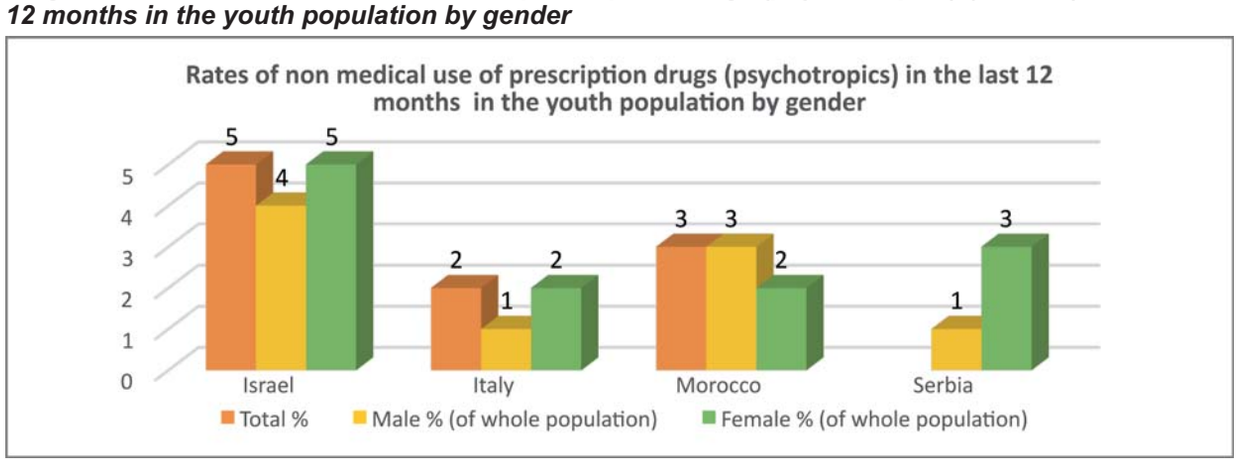


Diagram 20: Rates of non medical use of prescription drugs (psychotropics) (NMUPD) in lifetime in the youth population by gender



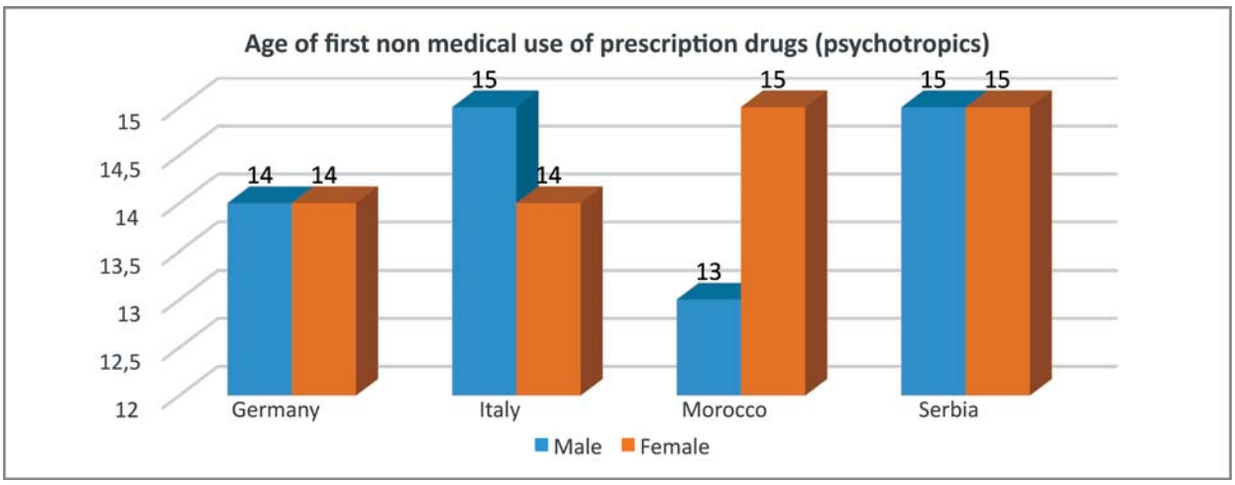
Rates of NMUPD for lifetime are higher for females in a number of countries most notably the CR, France Italy, Lithuania and the Netherlands

Diagram 21: Rates of non medical use of prescription drugs (psychotropics) (NMUPD) in the last 12 months in the youth population by gender



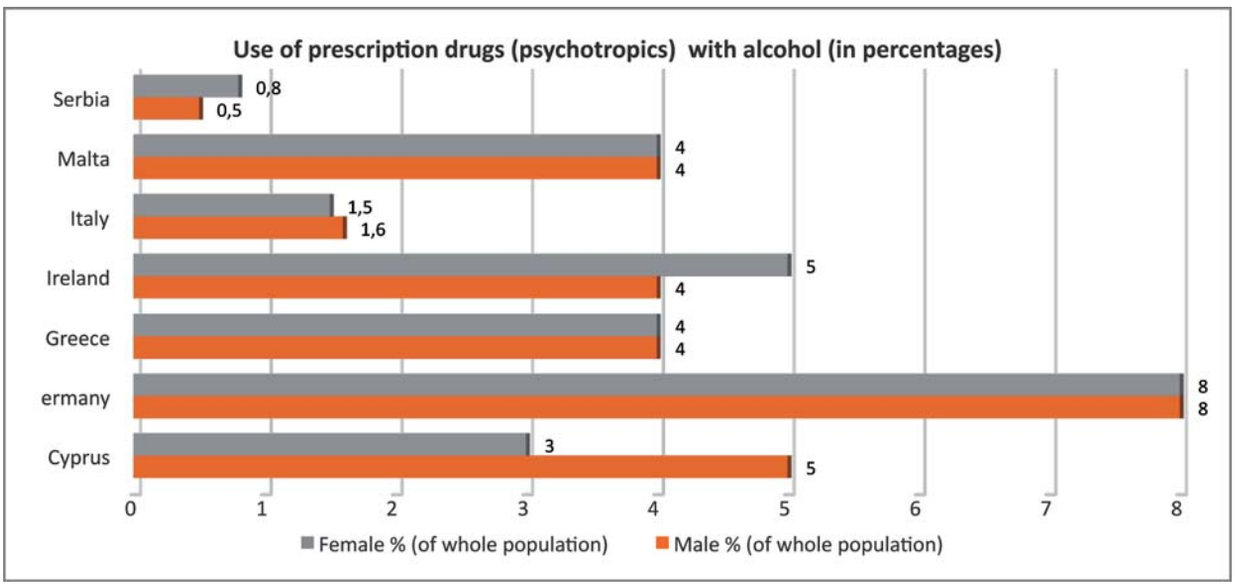
Rates are again higher for females in Israel, Italy and Serbia

Diagram 22: Age of first non medical use of prescription drugs (psychotropics)



Age of onset appears to coincide with the period of middle adolescence. **In middle adolescence the peer group and the school environment take on increased significance. While in early adolescence there may have been some experimentation with new forms of behaviour, middle adolescence is a time of increased risk taking behaviour without the capacity for realistic risk assessment (Santrock, 2013).** Separation from the family increases with decreased reliance on parental guidance and the desire to be accepted by one's peers can exert a strong influence on behaviour. In middle adolescence, cognitive abilities will increase rapidly and abstract thinking skills will improve. However, conflict may occur when an adolescent's physical development is more advanced than his or her ability to think abstractly. The need to become psychologically independent from parents will continue to grow. According to Muisener (1994), even if an adolescent successfully negotiates the passages of early adolescence, developmental stresses of middle adolescence can pose enough of a psychological threat to place the middle adolescent at high risk for problems with drugs. According to this author, drug use in middle adolescence has much to do with attempts at gaining mastery. As middle adolescence is a period of moving from the chaotic inner states of early adolescence to calmer states, adolescents often experience a budding self confidence with this growth in self management. Some young people may try to self manage through substance use, which for a while might appear adaptive. Thus they may attempt to deal with normal anxieties about dating, success in school and conflicts about pleasing their parents through the use of substances. The period of middle adolescence has been identified as that stage in the lifespan where deviant behaviour peaks (Santrock, 2011)

Diagram 23: Use of prescription drugs (psychotropics) in the youth population with alcohol.



Expert respondents were also asked to report on any **associations** of prescription drug use (psychotropics) with a number of variables such as educational attainment, age, leisure patterns, other substance use, family dynamics, chronic pain, mental health difficulties etc. observed in the surveys with youth populations.

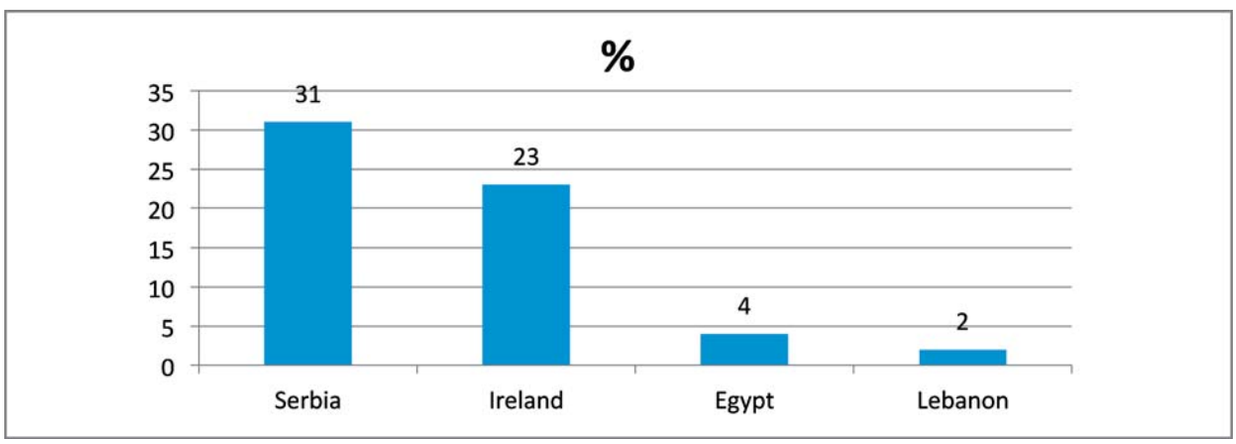
In Morocco, there is a statistically significant relation (p< 0,001) between the use of psychotropics and absenteeism from school, low grades, sleeping away from home, a family member or friendly consuming the substance, an ignorance of the prohibition of the use of drugs, ease of procurement of substances, and absence of perception of the danger related to use.

In Lithuania from 2007 to 2011, prevalence of life time use of tranquilizers/sedatives without a doctor's prescription among teenagers declined slightly from 15.6 to 13 percent.

In the Netherlands, results from a survey study (Ganpat, 2009) among 2385 Dutch youths aged between14 and 17 years found no significant differences in gender, age, education, ethnicity and region, between the group of young people who has used drugs for non-medical reasons (both prescription drugs and non-prescription drugs) and the group of young people who said that they never used (any) drugs inappropriately. A total of 64% (n = 228) of young people who have used drugs for non-medical reasons is female. A total of 86% is native Dutch. The average age of young people who have misused drugs is 16.1 years (no distinction is made by gender).

3.3.6 Emergency Department Visits & Emergency Hospital Admissions

Diagram 24: Percentage of emergency department visits/emergency hospital admissions recorded as being related to the use of a prescription drug/s (psychotropics) in the last 12 months [14]



Unfortunately few countries were able to report on this important indicator. Mortality data do not portray the morbidity associated with prescription drug overdoses or accidents related to prescription drug use. Data from emergency department (ED) visits can represent this morbidity and can be accessed more quickly than mortality data in order to better understand recent national trends in drug-related morbidity. In a US study by SAMHSA's Drug Abuse Warning Network (DAWN) [15] the number of ED visits involving nonmedical use of prescription or over-the-counter drugs increased rapidly during 2004--2008, and by 2008 matched the number of ED visits involving illicit drugs. ED visits involving such pharmaceuticals accounted for all of the growth in overall drug misuse/abuse rates during 2004--2008. ED visits involving opioids or benzodiazepines were the largest contributors to the increase in ED visits involving the nonmedical use of prescription or over-the-counter drugs.

[14] *NB. The data for Ireland relates only to emergency hospital admissions and not emergency department visits.*

[15] *http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5923a1.htm*

Diagram 25: Median age of emergency hospital admissions related to the use of prescription drugs (psychotropics) in the last year

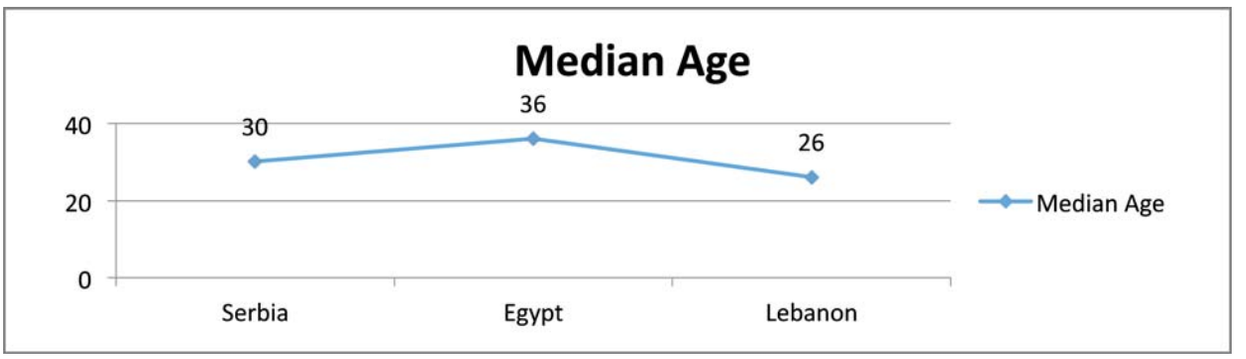
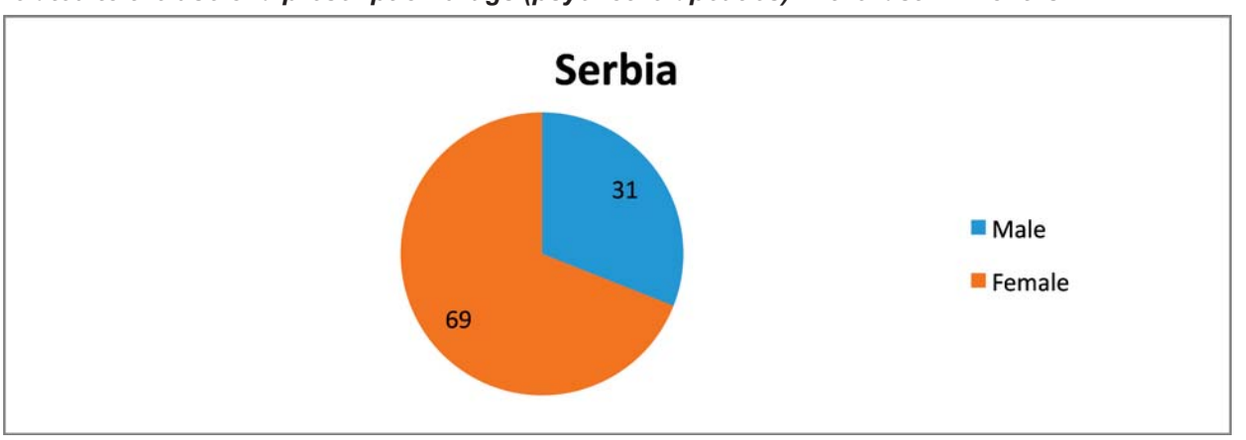


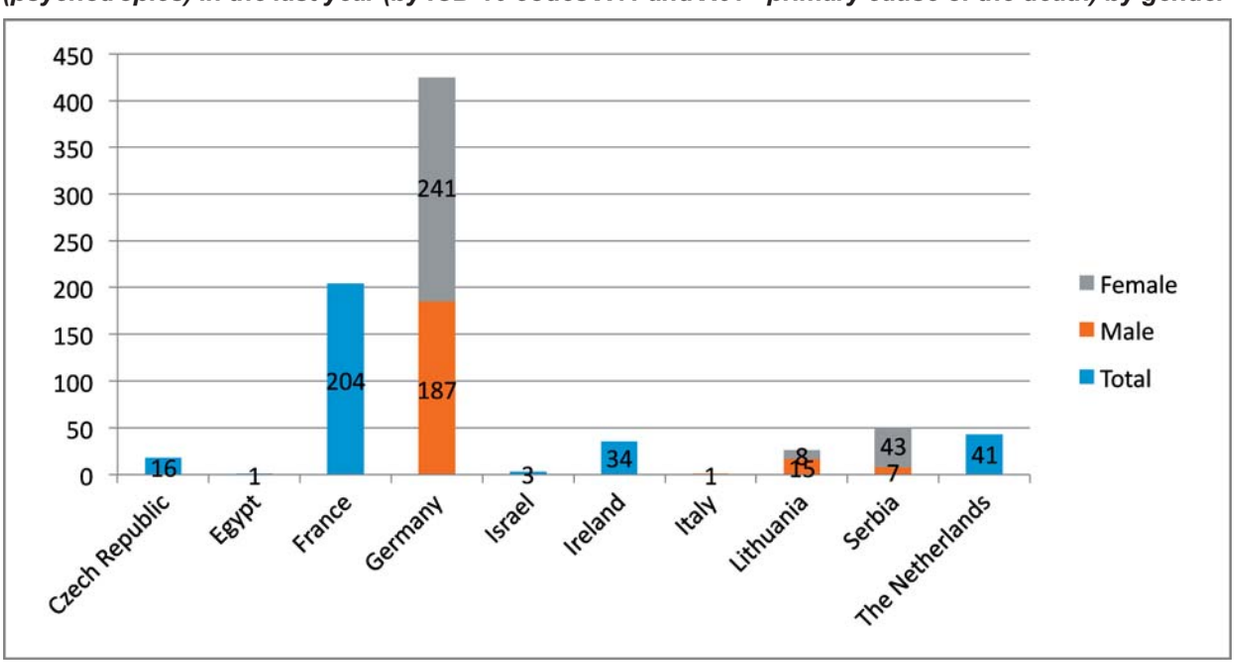
Diagram 26: Gender of patient at emergency department visit/emergency hospital admission related to the use of a prescription drugs (psychotherapeutics) in the last 12 months



Serbia was the only country providing data on this

3.3.7 Fatal and Nonfatal Overdoses

Diagram 27: Number of fatal overdoses (per million population) from the use of prescription drugs (psychotropics) in the last year (by ICD-10 codes X41 and X61 - primary cause of the death) by gender



In Germany and Serbia the number of fatal overdoses related to the use of psychotropics is higher for females than for males. This, together with ED visits, is an important but underreported indicator.

Diagram 28: Mean age of fatal overdoses by NMUPD:

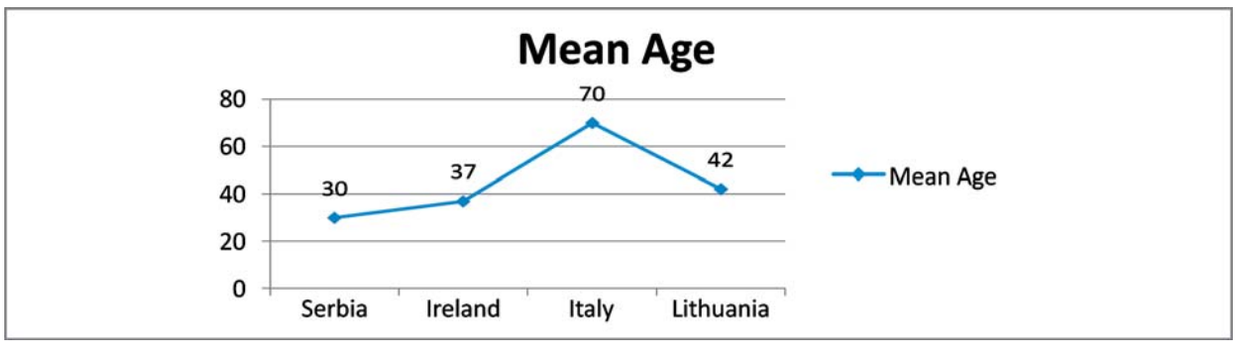
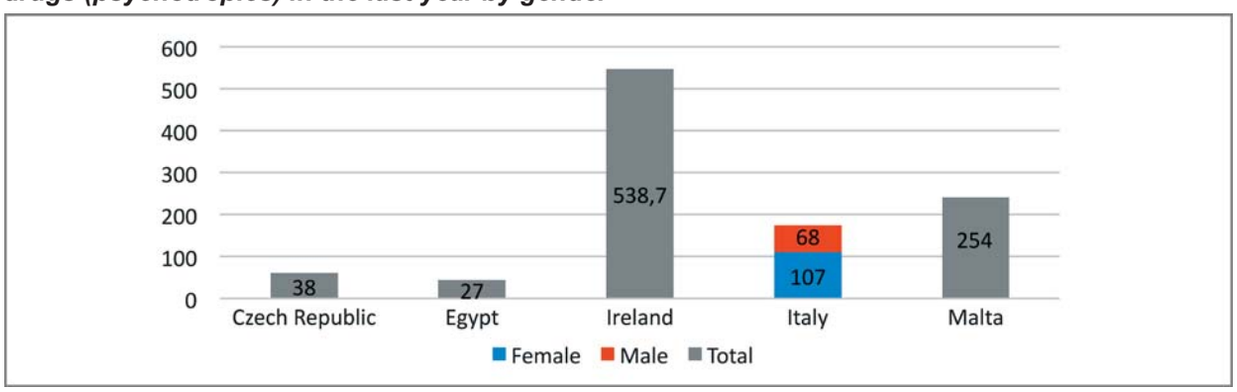


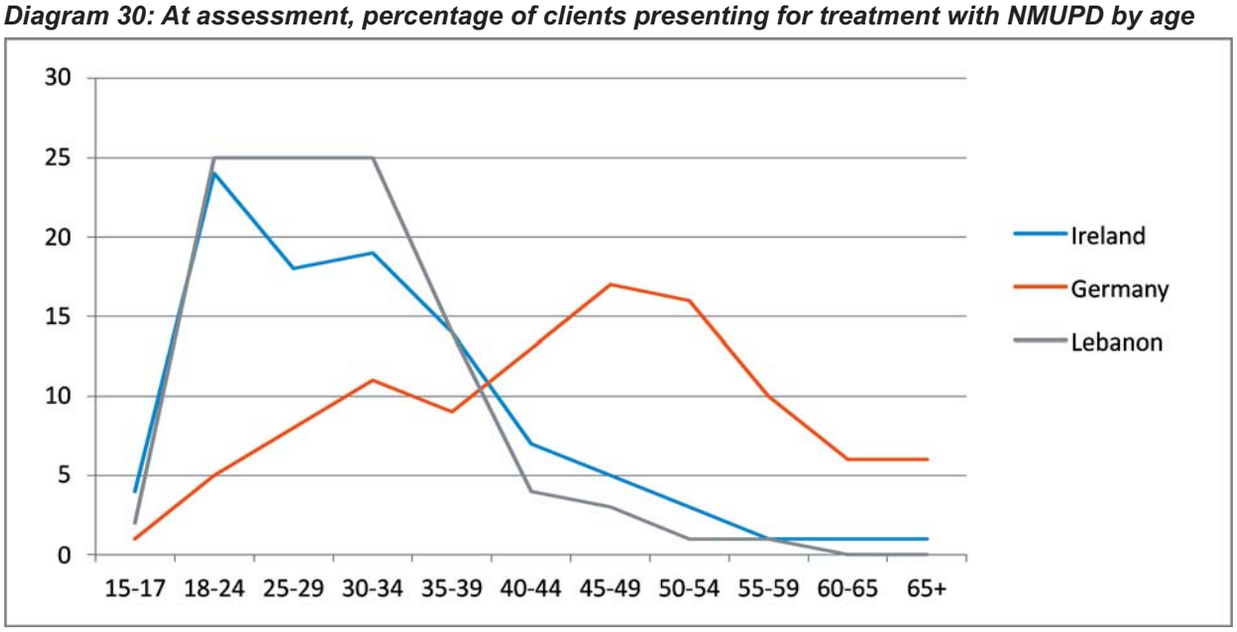
Diagram 29: Number of non fatal overdoses (per million population) from the use of prescription drugs (psychotropics) in the last year by gender



Only Italy was able to provide a breakdown of this data by gender.

3.3.8 Treatment data

Diagram 30: At assessment, percentage of clients presenting for treatment with NMUPD by age



France, Czech Republic, and Egypt reported in different age ranges so the data cannot be included in this table. Readers are referred to the individual country reports in the appendix

Diagram 31: At assessment, percentage of clients presenting for treatment with psychotropics as a primary drug by gender

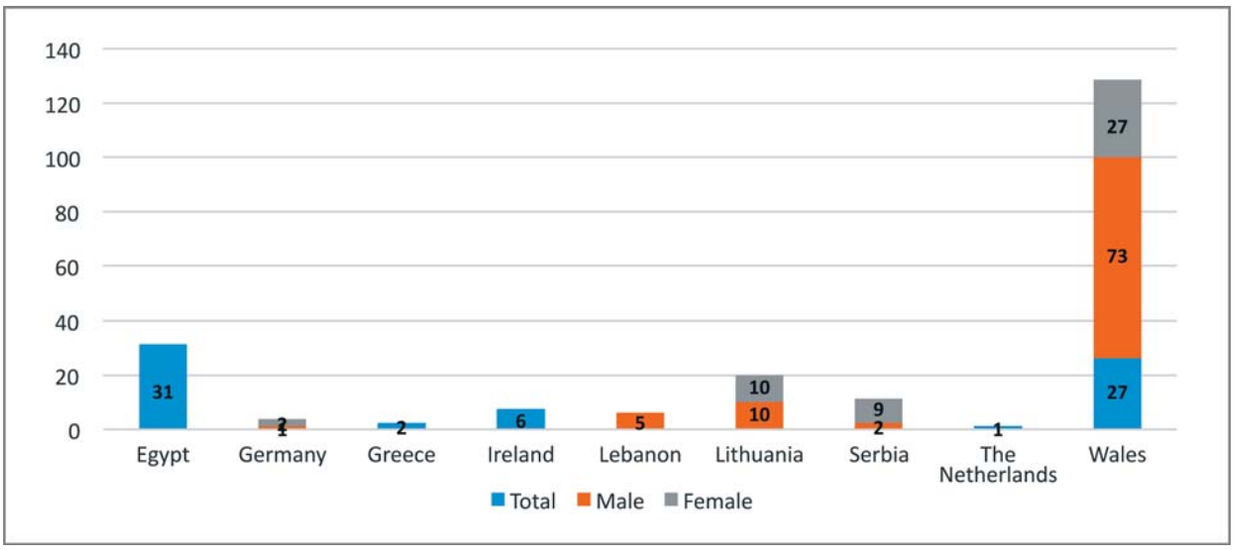
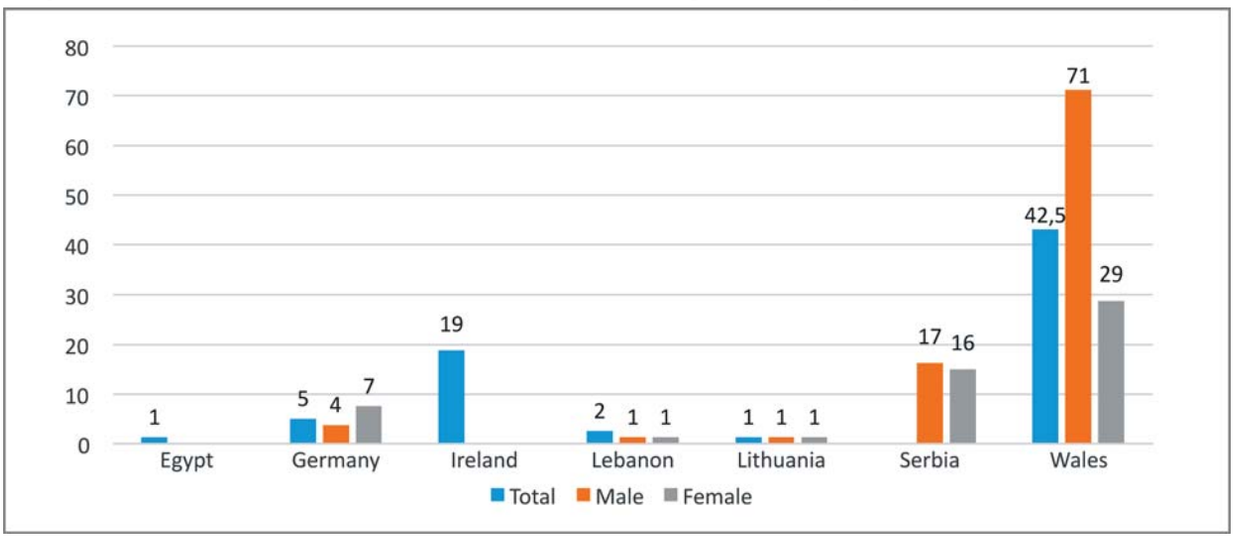


Diagram 32: At assessment, percentage of clients presenting for treatment with psychotropics in conjunction with the use of other substances, including alcohol by gender



The first actor who defined a common protocol for collecting data on people entering drug treatment was the Pompidou Group (PG), who coordinated studies at city level (in Dublin and London in 1991) and a developmental project in 11 cities and the creation of a European expert group which met several times to discuss and agree the methodological guidelines. The PG protocol was published in 1994 (Hartnoll, 1994; Stauffacher & Kokkevi, 1999) and was first implemented at city level and then at country level in west European countries; in a second phase, it was implemented in central and east European countries. The objective of the Treatment demand indicator is to collect information in a harmonised and comparable way across all Member States on the number and profile of people entering drug treatment (clients) during each calendar year. Although the name of the indicator is the 'Treatment demand indicator', it collects information on people entering treatment. This name will be maintained since the TDI is widely recognised as the instrument for collecting and reporting data on people entering treatment for their drug use inside and outside Europe, as an indirect indicator of the unobserved level of people that are potentially in need of drug treatment. The TDI protocol prescribes which clients should be reported at European level, and the minimum common set of items each national monitoring system should be able to record and report to the EMCDDA for each client. Each national drug treatment monitoring system may include more items than those defined in the EMCDDA TDI protocol, according to national and local information needs. Also, the categories of the

items collected at national level may be different from those requested in the TDI protocol, as far as it is possible to conduct a reliable conversion to the TDI categories.

Treatment data are an important source of information regarding the problem use of prescription medication. Studies in the US and elsewhere indicate that an increasing number of individuals are presenting with substance use disorders as a result of the use of a prescription medication.

3.3.9 Registration of Prescriptions

Table 17: Countries with a system in place to register the number of prescriptions for psychotropic substances [16]

Yes	No
Egypt	Cyprus
France	Czech Republic
Germany	Israel
Greece	Lebanon
Italy	Lithuania
Ireland	Malta
Wales	Morocco
	Serbia
	The Netherlands

3.3.10 Studies on NMUPD

The expert respondents were asked to provide a Reference list of key published studies on NMUPD in their country and to highlight the most salient findings. This has resulted in an impressive reference list on this subject and is an important source for further research.

Czech Republic:

- Běláčková, V., Nechanská, B., Chomynová & P. Horáková, M. (2012). *General Population Survey on Substance Use in the Czech Republic.* Praha: Úřad vlády České republiky.
- Csémy L., Chomynová P. & Sadílek P. (2009). *Evropská školní studie o alkoholu a jiných drogách (ESPAD).* Výsledky průzkumu v České republice v r. 2007. Praha: Úřad vlády České republiky.
- Miovský, M. (2007). Changing Patterns of Drug Use in the Czech Republic during the Post-Communist Era: A Qualitative Study. *Journal of Drug Issues,* 37(1), 73–102.
- Mravcík V., Nechanská B., St'astná L. (2011). Outpatient Care for Substance Users and Addicts in the Czech Republic in Health Statistics since 1963. *Epidemiol Mikrobiol Imunol,* 60(2):64-73.
- Mravcík V., Nechanská B., St'astná L. (2011). Residential care for substance users and addicts in the Czech Republic according to the health statistics since 1959. *Epidemiol Mikrobiol Imunol,* 60(1):21-31.
- Nechanská, B., Mravčík, V., Popov, P. (2012). *Misuse of psychoactive medicines in the Czech Republic – identification and analysis of data sources.* Úřad vlády ČR, ISBN 978-80-7440-073-5.

Egypt:

- Amr, M., El-Gilany, A. H., El-Mogy, A., Fathi, W. (2014). Substance abuse and dependence among patients attending an emergency hospital in eastern Nile delta, Egypt. *J Psychiatry,* 17:532-537
- Egypt Pharmaceutical Country Profile. Published by the Ministry of Health Egypt in collaboration with the World Health Organization, July 2011
- Mohy K. El Masry, M. K., &and Hany M. Tawfik, H. M. (20131). 2011 Annual Report of the Poison Control Centre of Ain Shams University Hospital, Cairo, Egypt. *Ain Shams Journal of Forensic Medicine and Clinical Toxicology,* 20: 10-17

[16] *In Ireland only public prescriptions are registered.*

- El-Sawy, H., Hay, M. A., & Badawy, A. (2010). Gender Differences in Risks and Pattern of Drug Abuse in Egypt. *Egypt J Neurol Psychiat Neurosurg*, 47(3): 413-418
- Hamdi, E., Tarek Gawad, T., Aref Khoweiled, A., Sidrak, A. E., Amer, D., Mamdouh, R., Fathi, H., & Loza, N. (2013). Lifetime Prevalence of Alcohol and Substance Use in Egypt: A Community Survey. *SUBSTANCE ABUSE*, 34: 97–104.
- Khalil, A., Okasha, T., Shawky, M., Haroun, A., El Habiby, M., Carise, D., Annon, J., Hasson, A., & Rawson, R. (2008). Characterization of substance abuse patients presenting for treatment at a university psychiatric hospital in Cairo, Egypt. *Addictive Disorders & Their Treatment,* 7 (4): 199-209.
- Soueif, M. (1994). Extent and pattern of Drug Use among Students and Working-Class Men in Egypt. *The National Center for Social and Criminological Research,* Cairo, Egypt.
- *The Global Survey of Drug Abuse and Addiction.* The National Center for Social and Criminological Research, Cairo, Egypt, 1999

France:

- Beck F., Guignard R., Haxaire C., Le Moigne P. (2014)., Les consommations de médicaments psychotropes en France, *La Santé en action,* mars 2014, n° 427, 47-49. (Baromètre santé 2010).
- Christine Chan-Chee, C. et al. (2011),. Hospitalisations pour tententatives de suicide entre 2004 et 2007 en France métropolitaine. , BEH n°47-48, 2011. (2)
- Etat des lieux de la consommation de benzodiazépines en France, janvier 2012, Afssaps, http://ansm.sante.fr (1)
- Inserm, Expertise collective, Médicaments psychotropes, consommation et pharmacodépendance, Editions Inserm, 2012.
- Marie Jauffret-Roustide, M. and et al. (2013)., Estimation de la séroprévalence du VIH et de l'hépatite C chez les usagers de drogues en France - Premiers résultats de l'enquête ANRS-Coquelicot 2011, *BEH* n° 39-40, november 2013, http://www.invs.sante.fr/beh/2013
- Lecadet J. , Vidal P., Baris B., Vallier N., Fender P., Allemand H. et le groupe Médipath. (2000), *Psychotropic Medications: Prescriptions and Use in Metropolitan France.* I. National Data for 2000.
- Les drogues à 17 ans, premiers résultats de l'enquête Escapad 2011, Tendances n° 79, OFDT, février 2012.
- *Social determinants of health and well-being among young people.* Health Behaviour in School-aged Children (HBSC) study: international report from the 2009/2010 survey, http://www.euro.who.int
- *The 2011 ESPAD Report Substance Use Amongamong Students in 36 European Countries*, p. 366, www.espad.org

Germany:

- Bacha, J., Reast, S., Pearlston,e A. (2010).: Treatment practices and perceived challenges for European physicians treating opioid dependence. *Heroin Addict Rel Clin Probl* 2010, 12: 9-19.
- Casati, A., Piontek, D., Pfeiffer-Gerschel, T.: (2014). Patterns of non-compliant buprenorphine, levomethadone, and methadone use among opioid dependent persons in treatment. *Substance Abuse Treatment, Prevention, and Policy* 2014, 9: 19.
- Fach, M., Bischof, G., Schmidt, C., Rumpf, H.J. (2007).: Prevalence of dependence on prescription drugs and associated mental disorders in a representative sample of general hospital patients. *Gen Hosp Psychiatry* 2007, 29: 257-263.
- Glaeske, G. (2012). Medikamente - Psychotrope und andere Arzneimittel mit Missbrauchs- und Abhängigkeitspotenzial. In *Jahrbuch Sucht* 2012. Edited by Deutsche Hauptstelle für Suchtfragen e. V. Lengerich: 2012:90-111.
- Küfner, H., Rösner, S. (2008).: Monitoring des Arzneimittelmissbrauchs bei Klienten ambulanter Suchtberatungsstellen (PHAR-MON, ehemals: ebis-med). *Gesundheitswesen* 2008, 70: 305-314.
- Reimer, J. (2011).: Kurzfassung der Folgestudie zur nicht bestimmungsgemäßen Verwendung von Substitutionsmitteln in Deutschland. Hamburg: Zentrum für Interdisziplinäre Suchtforschung (ZIS) der Universität Hamburg; 2011.
- Scherbaum, N., Kluwig, J., Meiering, C., Gastpar, M.: (2005). Use of illegally acquired medical opioids by opiate-dependent patients in detoxification treatment. *Eur Addict Res* 2005, 11: 193-196.

- Stafford, N. (2010). At least 25% of elderly residents of German nursing homes are addicted to psychotropic drugs, report claims. *Br Med J* 2010, 340.

Greece:

- Fotiou, A., E. Kanavou, et al. (2014). "Misuse of prescription opioid analgesics among adolescents in Greece: the importance of peer use and past prescriptions." *Drugs: Education, Prevention & Policy.*
- Kokkevi, A., A. Fotiou, et al. (2007). "Drug use in the general population of Greece over the last 20 years: results from nationwide household surveys." *Eur Addict Res,* 13(3): 167-176.
- Kokkevi, A., A. Fotiou, et al. (2008). "Prevalence, patterns, and correlates of tranquilizer and sedative use among European adolescents." *J Adolesc Health,* 43(6): 584-592.

Ireland:

- Apantaku-Olajide, T., &and Smyth, B. P. (2013). Non-medical use of psychotropic prescription drugs among adolescents in substance use treatment. *Journal of psychoactive drugs,* 45 (4). pp. 340-346.
- Ballymun Youth Action Project (2004). Benzodiazepines-whose little helper? The role of benzodiazepines in the development of substance misuse problems in Ballymun. *National Advisory Committee on Drugs*, Dublin. Retrieved from www.drugsandalcohol.ie/5898/
- Corcoran, P., Heavey, B., Griffin, E., Perry, I. J. & Arensman, E. (2013). Psychotropic medication involved in intentional drug overdose: implications for treatment. *Neuropsychiatry,* 3 (3). pp. 285-293. Available at www.drugsandalcohol.ie/21988/
- Flynn, K. (2009). Minor Tranquillisers and Sedatives Use and Misuse in the West of Ireland. Galway: *Western Region Drugs Task Force.* Available at www.drugsandalcohol.ie/11506/
- Griffin, E., Arensman, E., Wall, A., Corcoran, P. and Perry, I. J. (2013). National Registry of Deliberateof Deliberate Self Harm Annual Report 2012. *Cork: National Suicide Research Foundation.* Available at www.drugsandalcohol.ie/20507/
- Martyn, M. (2012). Drug and alcohol misuse among adult offenders. Findings from the drugs and alcohol survey 2011. *Probation Service,* Meath. Available at www.drugsandalcohol.ie/18746/
- O'Gorman, A., Piggott, K., Napier, K., Driscoll, A., Emerson, D., Mooney, R., Fennelly, C., Gately, P. & Foley, M. (2013). An analysis of current licit and illicit drug use patterns in the Finglas-Cabra local drugs task force area. *Finglas/Cabra Local Drugs Task Force*, Dublin. Available at www.drugsandalcohol.ie/20723/
- Quigley, P., Usher, C., Bennett, K. & Feely, J. (2006). Socioeconomic influences on benzodiazepine consumption in an Irish region. *European Addiction Research,* 12(3), 145-150. Available at www.drugsandalcohol.ie/6787/

Israel:

- Bentur, Y.1, Obchinikov, N.D., Cahana, A., Kovler, N., Bloom-Krasik, A., Lavon, O., Gurevych, B., Lurie, Y. (2010). Pediatric poisonings in Israel: National Poison Center data. *Isr Med Assoc J,*. 2010 Sep;12(9):554-9.
- Jaber, L.1, Rigler, S., Shuper, A., Diamond, G. J. (2014). Atten DisordChanging Epidemiology of Methylphenidate Prescriptions in the Community: A Multifactorial Model. *Atten Disord*, 2014 Apr 28.
- Ponizovsky, A. M., Marom, E., Fitoussi, I. (2014). Trends in attention deficit hyperactivity disorder drugs consumption, Israel, 2005-2012. Ponizovsky AM1, Marom E, Fitoussi I. Pharmacoepidemiol Drug Saf. 2014 May; 23(5):534-8.
- Ponizovsky, A. M.,1, Marom, E., Zeldin, A., Cherny, N. I. (2011). Trends in opioid analgesics consumption, Israel, 2000-2008. *Eur J Clin Pharmacol, .* 2011 Feb;67(2):165-8.
- Vinker, S.1, Vinker, R., Elhayany, A. (2006). Prevalence of methylphenidate use among Israeli children: 1998-2004. *Clin Drug Investig, .* 2006;26(3):161-7.

Malta:

- Ellul Darmanin, R., Cordina, M., Buhagiar, A., Fenech, A. & Mifsud, J. (2009). An analysis of gender differences in self-reported health, use of medicines and access to information sources about medicines among adolescents. *International Journal Adolescent Medical Health,* vol. 4, pp. 591-600.
- ESPAD European School Survey Project on Alcohol and other Drugs

- National Report on the Drug Situation in Malta 2012 (Maltese National Focal Point)
- Use of Licit and Illicit Drugs in Malta (2013) A General Population Survey among 18-65 year olds

Morocco:

- Drug Misuse and treatment in Morocco www.uom.ac.mu
- Usage de drogues en milieu scolaire marocain Rapport MedSPAD 2009-2010 www.coe.int

Serbia:

- Institute of Public Health of Serbia (2011), data extracted from TDI database on request, unpublished
- Institute of Public Health of Serbia (2013). Realisation of National programme of prevention of drug and alcohol abuse. Report on realisation in the period from 1 January to 31 December 2012.
- Institute of Public Health of Serbia 2010 Morbidity report from on specific request, unpublished
- Institute of Public Health of Serbia Youth health in Serbia, final report, 2009
- Institute of Public Health of Serbia, 2010. Report on IPH activities within National program for drug prevention, December 2010, unpublished.
- Institute of Public Health of Serbia, National office for HIV/AIDS report, 2009
- Institute of Public Health of Serbia. Ministry of Health (2000), 'Health need, health status and use of health care in Serbia'.
- Manzoni MJ, Bjegovic V, Jankovic-Ciric S, Prepeliczay S. Survey on alcohol and other drugs abuse among young people in Serbia; 2005.
- Medical Military Academy(2011). Report provided on request, unpublished
- Ministry of Health (2006) 'Health Survey'.
- Ministry of Health of the Republic of Serbia, Institute of Public Health of Serbia, ESPAD,Report for the Republic of Serbia 2009
- Ministry of Health of the Republic of Serbia, Institute of Public Health of Serbia, ESPAD, preliminary results for 2011, unpublished
- Ministry of Health of the Republic of Serbia, Institute of Public Health of Serbia (2008), 'European survey on the use of alcohol and other drugs among young people in Serbia'.
- Ministry of Interior (2011) Report on seizures and criminal acts, provided on request, unpublished
- Ministry of Justice Prison Administration (2009), Annual report on prison administration operations.
- MOLNAR, I. 2013, 24 April Colored City: Recreational drug use in Belgrade [Online]. Drug reporter. Available: http://drogriporter.hu/en/serbian_party_scene_drug_use_Belgrade [Accessed 12 February 2014].
- National Strategy for the Fight against Drug Abuse for 2009 – 2013("Official Gazete of Republic of Serbia" No 16/09).
- Professional Ethics Codex ("Official Gazete of Republic of Serbia" No 1/06).
- Raketić, D., Stamatović Gajić, B., Gajić, T., Jovanović, M. (2013). Women and addiction (alcohol and opiates): comparative analysis of psychosocial aspects. *Srp Arh Celok Lek*, 141(9-10):648-52.
- Strategic Marketing (2006), 'Narcotics in Serbia'.
- Surveys among most at HIV risk population and among people living with HIV. Ministry of Health. Belgrade: 2008: http://www.batut.org.rs/download/publikacije/istrazivanje2008.pdf (accessed in February 2014) (available in Serbian).
- Surveys among most at HIV risk population and among people living with HIV. Ministry of Health. Belgrade: 2010: http://www.batut.org.rs/download/publikacije/istrazivanje2010.pdf (accessed in February 2014) (available in Serbian with summary in English).
- Surveys among most at HIV risk population. Ministry of Health. Belgrade: 2012. http://www.batut.org.rs/download/publikacije/Istrazivanja%20medju%20populacijama%20pod%20povecanim%20rizikom%20od%20HIV-a.pdf (accessed in February 2014)
(available in Serbian with summary in English) National Health Survey,2006.
- The health of the population of Serbia-analytical study 1997-2007.Belgrade,2008.

The Netherlands:

- Ganpad, S., Kleinjan, M., & Van de Mheen, D. (2009). *Inappropriate medication use among Dutch youth: Nature and scope.* IVO: Rotterdam.
- Hibell, B., Guttormsson, U., Ahlström, S., Balakireve, O., Bjarnason, T., Kokkevi, A., et al. (2012). *The 2011 ESPAD report: Substances use among students in 36 European countries.* CAN: Stockholm.
- Nabben, T., Benschop, A., & Korf, D. J. (2012). *Antenne 2011: Trends in alcohol, tobacco and drugs among young Amsterdam people.* Rozenberg Publishers: Amsterdam.
- Stichting Farmaceutische Kengetallen [Foundation for Pharmaceutical Statistics] (2011). *Data and facts 2011: the year 2010 in statistics.* SFK: Den Haag.
- Stichting Farmaceutische Kengetallen [Foundation for Pharmaceutical Statistics] (2012). *Data and facts 2012: the year 2011 in statistics.* SFK: Den Haag.
- Van Rooij, A. J., Schoenmakers, T. M., & Van de Mheen, D. (2011). *National Prevalence Study Substance Use 2009: Core Statistics 2009.* IVO: Rotterdam.

The studies documented above present some interesting insights.[17] **In Egypt,** an alarming figure has been the progressive rise of tramadol overdose amounting to 1595 cases in the year 2011 compared to 386 cases in 2009 and 760 cases in 2010. There is an observed trend of younger age for non-medical use of prescription drugs in males. Also, more females are involved in prescription drug use. There was an observed trend of increased tramadol use among males who work in occupations requiring physical effort. Also, a lot of males start their use to improve sexual performance. More females start their drug use in relation to pain, stress, marital problems, as well as self-medication for psychiatric disorders or symptoms

In France With regards to benzodiazepine use 59,3% of the users of benzodiazepine are women. The median age of male users is 47; women's is 49. Almost one in five women uses benzodiazepine tranquillisers when aged from 30 to 40 ; almost one in three from 70 to 75. This increase is less important in the male group, with 10% of men using benzodiazepine tranquillisers from 30 to 40, and less than 15% from 70 to 75. An analysis of the hospital admission database reveals that in metropolitan France, between 2004 and 2007, a total of 359,619 hospitalisations by 279,843 patients in medicine and surgery wards were recorded for SA (suicide attempts), i.e. approximately 90,000 hospitalisations by 70,000 patients per year. Over the four years studied, 84.1% of the patients were hospitalized once, and 15.9% were hospitalized several times for SA. Female admissions represented consistently 65% of the global admissions for SA each year. The most frequent method of SA was self poisoning by drugs concerning 79% of the hospitalised SA, accounting for 67,000 to 79,000 hospital admissions per year. The hospitalisation rate for SA was 16.9 per 10,000 inhabitants (12.4 per 10,000 men and 21.2 per 10,000 women). Females between 15 and 19 years of age were the group with the highest rate (43 per 10,000). Before 14 years of age, the rate is about 14 per 10,000 persons. Between 40-41, the rate was 31 per 10,000 women.

In Germany, literature on opioids and analgesics shows how Bacha et al. (2010) investigated opioid dependence treatment using an online questionnaire on 300 practicing physicians and found that mean methadone and buprenorphine maintenance doses were markedly subtherapeutic. 72% of subjects reported that buprenorphine and methadone misuse among patients was a significant problem. Casati et al. (2014) explored the misuse of opioid substitution treatment medicines among 595 opioid dependent persons in treatment and found differential patterns of non-compliant buprenorphine, levomethadone, and methadone use regarding parallel consumption with other substances, intravenous use, procurement through prescriptions, and reasons for use. Fach et al. (2007) screened 952 general hospital patients and found that 1.3% of the sample displayed dependence on analgesics. Küfner et al. (2008) investigated medicine misuse among substance abusers attending outpatient treatment facilities and found that 14.3% of alcohol-dependent subjects and 12.2% of sedative/hypnotic dependent subjects misused analgesics. Reimer et al. (2011) investigated the non-complaint use of opioid substitution treatment medicines among opioid addicts in and out of treatment and found that those in treatment used medicines in a more compliant manner and were less likely to use illegal drugs. Scherbaum et al. (2005) investigated 142 opioid dependent patients admitted to a detoxification ward and found that 53.5% of subjects misused medical opiates, especially methadone. Stafford (2010) found that approximately 25% of nursing home residents over the age of 70 are addicted to

[17] *The list of studies submitted by the expert researchers are not included in the reference list at the end of the report.*

psychotropic drugs. Of Germans >60 years of age, between 1.7 and 2.8 million misuse psychotropic drugs or painkillers or are dependent on these substances. Glaeske (2012) summarized the distribution of prescription drugs in Germany and their associated costs. The author also explored benzodiazepine, tilidine and tramadol misuse and dependence in Germany.

In Greece Kokkevi, et al. (2008) examined the prevalence, patterns, and correlates of nonmedical use of tranquilizers or sedatives in 85,000 adolescent students from 31 European countries in 2003. Their results showed that lifetime nonmedical tranquilizer or sedative use was reported by 5.6% overall. Medical tranquilizer or sedative use multiplies the odds of nonmedical use by 10.7 for boys and 7.2 for girls. Nonmedical tranquilizer or sedative use was also associated with the use of tobacco, alcohol, and illicit drugs. Further correlates were truancy, tranquilizer or sedative use by friends and siblings, and dissatisfaction with relationships with parents. Medical tranquilizer or sedative use shared to a large extent the same correlates. Their findings indicate similarities in adolescent tranquilliser or sedative use between Europe and United States. Kokkevi, A., A. Fotiou, et al. (2007) in "Drug use in the general population of Greece over the last 20 years: results from nationwide household surveys.'present the evolution of the drug use epidemic in Greece over a 20-year period, taking into account the sociocultural context and policies. After a large increase in lifetime illicit drug use prevalence from 4.0% in 1984 to 12.2% in 1998, the phenomenon seems to have taken a downward turn, to 8.6% in 2004. The incidence of illicit drug use remained unchanged between 1998 and 2004 in adolescents, declined in the young adult group (18-24 years) and dropped sharply at older ages. Cannabis accounts for almost all the total prevalence of illicit drug use; other illicit drugs have lifetime prevalence below 1%. The large gender differences in illicit drug use have narrowed over the years, especially in the younger age groups, although males remain far more heavily involved in illicit drug use than females. The lifetime prevalence of unprescribed use of pharmaceuticals has decreased markedly over the last 20 years from 13.5 to 9.1% following a stricter policy on prescribing. A narrowing of gender differences was also observed here, although females continue to predominate. Findings from the Greek general population surveys have had an impact on drug policy in the past and continue to represent an important input to policy formulation.

In Ireland, Apantaku-Olajide et al. (2013) examined non-medical use of seven categories of psychotropic prescription drugs in a clinical sample of Irish adolescents with substance use disorders, over a 3-month period. The sample consisted largely of males (76%). There were no significant differences in the age and gender between the respondents and the non-respondents. Among respondents, 68% reported lifetime non-medical use of any of the prescription drugs. The mean number of prescription drugs used non-medically was 2.3. The mean age of the lifetime non-medical users was 16.7 years, and the mean age of medical users and non-users was 15.4 years. No significant difference existed between the non-medical users and the other categories of user with respect to gender. The most commonly used prescription drugs by the 'diverted user group' (i.e. used the class of prescription medication without a healthcare professional's prescription) were sedative/anxiety medications (62%), followed by sleeping (hypnotic) medications (43%), opioid analgesics (19%), antipsychotics (13%), antidepressants (11%), stimulants (8%) and anabolic steroids (2%). All the lifetime non-medical users gave more than one readily available source: - friends - 76% - street-level drug markets - 40% - thefts - 17% - family members - 7% None reported getting prescription drugs on the internet. The authors comment that although general population samples of Irish teenagers indicate lower than average rates of abuse of prescription drugs, the rates of abuse appear to be high among the subset of teenagers who abuse illicit drugs. The authors also report that they found 'no gender or substance use differences among those who reported abuse of prescription drugs.' However, they acknowledge that their report had very 'modest power' to detect differences in rates between genders. With regard to opioid analgesics, the authors suspect that most of the reported abuse relates to 'over-the-counter' products as opposed to the more potent prescription-only opioid analgesics. Corcoran et al. (2013) investigated the proportion of patients who engaged in intentional drug overdoses (IDOs) with current prescriptions and the proportion of those that used their medicines in overdose acts, as well as the factors associated with patients who do so. Most of the IDO presentations involved female patients (59.9%). Minor tranquillisers was the drug category most commonly associated with IDOs among women (45%), followed by Paracetamol (28.7%), SSRIs [selective serotonin reuptake inhibitors] and NSAIDS/other analgesics (both 16.4%). The prescription of psychotropic drugs was associated with the use of these drugs in IDOs. Having a prescription for a minor tranquiliser increased the risk of using prescribed psychotropic drugs in IDOs even when controlling for other factors.

Griffin et al. (2013) conducted a study based on data collected on persons presenting to hospital emergency departments as a result of deliberate self-harm in 2012 in the Republic of Ireland. Drug overdose was the most common method of self-harm, involved in 69% of all acts registered in 2012, and more so in women (75%) than in men (62%). The peak rate for women was in the 15-19 years age group, whereas the peak rate among men was in 20-24 year-olds. Drug overdose also accounted for a higher proportion of self-harm presentations in the older age groups, in particular for women. 41% of all overdoses involved a minor tranquilliser (defined by the NSRF as 'primarily drugs used to treat anxiety disorders, and mainly made up of benzodiazepines, the most common drug types in this group being Valium [Diazepam], Xanax, Zimovane, Dalmane, Stilnoct) and such a drug was used significantly more often by men than by women. A major tranquilliser was involved in 10% of overdoses. Paracetamol was the most common analgesic drug taken, being involved in some form in 28% of drug overdose acts. Paracetamol was used significantly more often by women (32%) than by men (22%). More than one in five acts (22%) of deliberate overdose involved an anti-depressant/ mood stabiliser. The group of anti-depressant drugs known as Selective Serotonin Reuptake Inhibitors (SSRIs) were present in 13% of overdose cases. Street drugs were involved in 9% of male and 3% of female intentional drug overdose acts. 'Other prescribed drugs' were taken in more than one in four (27%) of all overdoses which reflects the wide range of drugs taken deliberately in acts of drug overdose. O'Gorman et al. (2013) studied current patterns of illicit and licit drug use in an area of socio-economic deprivation with a pattern of drug use higher than the national average. According to the authors, two-thirds of those encountered were male, reflecting the 'gendered pattern of public space'. With regard to the taking of prescription and over-the-counter medications, the authors reported widespread availability and affordability of 'tablets', which were used along with alcohol across all drug users groups.

The Drugs and Alcohol Survey 2011 conducted by the Probation Service was the first large-scale, nationwide survey among the adult offender population on probation supervision. The main objectives of the study were to: ascertain the number of adult offenders on probation supervision who misused drugs and/or alcohol, examine the nature and frequency of drug and alcohol misuse, establish if there is a correlation between drug and/or alcohol misuse and offending and offending behaviour, and identify the level and nature of engagement with drug and alcohol treatment services. Key findings include: 89% of the adult offender population on probation supervision had misused drugs or alcohol either 'currently' (at the time of the survey) or in the 'past'. While females comprised only 12% of the adult offender population, both male and female adult offenders exhibit similar drug and alcohol misuse levels. The Dublin probation regions exhibited the highest levels of overall misuse among their offender populations at 91%. The majority of misusers of prescribed drugs were males in the 18-34 age-group at 72.6%. However, notably 10% of the misusers were female in the 25-34 age-group. The Dublin regions are proportionally highest for current opiate misuse, current prescription drugs and also current stimulant misuse.

Flynn K (2009) focused on use of benzodiazepines and non-benzodiazepine hypnotics. The author found that 89,721 individuals were prescribed minor tranquillisers and sedatives between 2000 and 2007; 58% were female and 42% male, with 80% being GMS patients (i.e. medical card holders). Over 54% of the individuals prescribed minor tranquillisers and sedatives were over the age of 65. Of that category, 62% were female and 38% male. In summary, the findings of the study indicated that women, older people and people on low incomes were over represented in the averages, while men and people on higher incomes are correspondingly under-represented.

Quigley et al. (2006) examined the prescribing of diazepam in disadvantaged Irish communities, and identified factors which may predict diazepam consumption in that population. Results showed that patients living in the most-deprived areas were more likely to receive diazepam than patients living in the least-deprived areas. Female patients living in the most-deprived areas were also more likely to receive diazepam than those living in the least-deprived areas. It is concluded that there is a pattern of higher diazepam prescribing in areas of greatest deprivation, where prescription sedatives play a complex role within troubled families. Ballymun Youth Action Project (2004) examined the problem of benzodiazepine use in Ballymun, an area of Dublin characterised by 'significant socio-economic disadvantage'. The findings suggested that benzodiazepine prescribing in Ballymun was notably higher than the national level. The research also identified elements of a relationship between socio-economic disadvantage and benzodiazepine use, and suggested a clear gender bias in their prescribing: women were prescribed almost two-thirds of all of this type of drug

prescribed in the area. The authors found there was a significant supply of benzodiazepines, which appeared to originate from prescriptions.

In Israel, methylphenidate prescriptions showed an increase in prevalence from 4.2% to 7.5% in the years 2007 to 2011, respectively. Jewish children were four times more likely to be prescribed Methylphenidate than Arab children. Higher SES and male gender were associated with greater use of Methylphenidate. General pediatric prescription rates of Methylphenidate in all communities increased by 85%, compared with year 2007 statistics. Consumption of all ADHD drugs covered by Israel's national health care system doubled over the study period. The overall 1-year prevalence rate of methylphenidate use in children aged 0-18 years increased from 0.7% in 1998 to 2.5% in 2004. In 1998, the rate of methylphenidate prescription ranged from 0.20% among schoolgirls to 1.2% among boys, a 6-fold difference. In 2004, the rate of methylphenidate prescription ranged from 1.1% among schoolgirls to 3.8% among boys; the sex difference had narrowed to only 3.45. Except for kindergarten girls, methylphenidate utilisation increased for all ages from kindergarten to high school, both among boys and among girls. A total of 15,005 pediatric poison exposures were recorded in 2007. Among adolescents, most exposures were intentional (49.3%, 38.2% suicides). The most common substances were acetaminophen, methylphenidate, non-steroidal anti-inflammatory drugs, atropine and ethanol. Consumption of the five strong opioids (requiring a special prescription form) increased by 47% from 2000 to 2008. The consumption of anxiolytics in most Middle Eastern countries increased, and the highest levels were reached in Cyprus and Israel. In the Middle East the consumption of the sedative hypnotics Benzodiazepines more than doubled in Israel from 1999 to 2009. Israel is the number 1 consumer of narcotics in the Middle East and number 23 in the world. Oxycodone and methadone consumption levels increased moderately, and buprenorphine and dextropropoxyphene consumption rose drastically, whereas morphine, pethidine, and codeine use significantly fell.

3.3.11 National Policy Documents

Table 18: NMUPD and National Policy Documents

	Issue of NMUPD addressed in country's National Policy Documents
Cyprus	X
Czech Republic	X
Egypt	X
France	X
Germany	X
Greece	
Ireland	X
Israel	
Italy	
Lebanon	X
Lithuania	X
Malta	X
Morocco	X
Serbia	X
The Netherlands	
Tunisia	
Wales	X

The table below documents how the phenomenon of NMUPD is addressed in the National Policies of the participating countries and documents whether the policies make special reference to gender issues

Table 19: Policy document details

Cyprus	The National Strategy of Illicit Drugs and the Harmful Use of Alcohol 2013-2020 focuses on dealing with addiction and dependence in general without mentioning specific substances. The non medical use of prescription drugs is therefore a part of the Strategy. Although there are no gender specific actions implemented, the CAC established cooperation with the Pharmaceutical Services of the Ministry of Health for creating a monitoring mechanism of prescription drugs as well as for monitoring and improving the prescribing practices. In addition, within the framework of this cooperation, a committee was established which is reviewing the UNODC and WHO suggestions aiming at incorporating them in the practices for the prescription of medical drugs.
Czech Republic	National Drugs Action Plan 2013 - 2015 - the key objective is integrated drug policy, i.e. seeking to provide a comprehensive solution to the issue of both, legal and illegal drugs - activities in chapters on Prevention, Treatment, Monitoring and Research concerned with legal drugs (including the issue of NMUPD) are incorporated into the individual intervention areas, in line with principle of policy integration.
Egypt	According to ANGA 2004 report, and according to the provisions of article 12 of the UN Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988, for assigning a national authority to implement national control on precursors and chemicals, issue import and export permits, control distribution and prevent their infiltration to the illicit use, the Egyptian Government appointed: 1. The Ministry of Health and Population (Central Administration for Pharmaceutical Affairs – Narcotics Section). 2. The Ministry of Interior (Anti – Narcotics General Administration)
France	There is no National Policy Document in France, but some reports include recommendations for the national policy. These reports are : - Le bon usage des médicaments psychotropes pour le compte de l'Office Parlementaire d'Evaluation des Politiques de Santé (OPEPS) – Assemblée et Sénat (2006) - Inserm, Expertise collective, Médicaments psychotropes, consommation et pharmacodépendance, Editions Inserm, 2012. Governmental plan for addictive behavior 2013-2017 mentions some elements on prescription drugs, and the "governmental action plan 2013-2015" settles some concrete measures to implement the orientations of the 2013-2017 plan, but this issue is not central at all. For instance, women with addictive behavior are mentioned as a vulnerable and targeted population in the introduction of the plan, but without any further development. Prescription drugs are broached trough the following topics, either very specific or very broad: • Misuse of STO (in part 1 of the government plan) • Traffic and diversion of prescription drugs in jail (part 2) • Traffic and drug-codependence in French overseas territories (part 2). These geographical regions are targeted in "action n°59" of the "action plan" • Use of "performance" drugs in specific populations: amateur athletes, pupils, students (part 3). Actions n°90, n°91, n°92 deal with the issue of making the prescription and providing chain more secure for those performance drugs. The "CNS stimulant" category of drug is not mentioned here. • Develop observatories for consumption and traffics, also for prescription drugs (part 5)

Germany	The current German national strategy on drugs and dependence policy („Nationale Strategie zur Drogen- und Suchtpolitik“) addresses alcohol, tobacco, medicine misuse, illegal drugs and gambling. It has formulated four main goals regarding medicine misuse and dependence: 1: To improve scientific knowledge and data on neuroenhancement and to develop prevention measures against medicine misuse that target specific groups. 2: To improve pharmacists’ information on medicine misuse and dependence. 3: To improve physicians’ compliance to regulations for the prescription of psychotropic medicines. 4: To strengthen early warning and early intervention efforts to reduce dependence on medicines, especially among the elderly. The national strategy does not make mention of policies addressing specific gender issues.
Ireland	1. The NACDA is tasked with actions under the National Substance Misuse Strategy 2009-2016. Its function is to provide advice to Government on the issue of substance misuse in Ireland based on research findings and other information available to it. The NACDA carries out research into the use of a wide range of licit and illicit drug use in Ireland in its Drug Use in Ireland and Northern Ireland: Drug Prevalence Survey. The Survey provides prevalence rates for key illegal drugs, prescription drugs (including sedatives or tranquillisers and anti-depressants), on a lifetime (ever used), last year (used in last 12 months), and last month (used in last 30 days) basis. 2. The National Drugs Strategy 2009-2016 notes the statistics relating to deaths arising not only from illegal drugs but also from legal substances including prescription and over-the-counter drugs; the fact that work on a National Overdose Prevention Strategy has begun; that concerns continue with regard to the oversupply and over-use of benzodiazepines and that further action is needed with regard to regulation and monitoring, and the implementation of clinical guidelines; and finally that while the monitoring of prescribing to patients under the GMS scheme has been improved, the monitoring of private prescribing has proved more problematic and needs to be addressed. Furthermore in this document, there is a stated commitment to take actions which focus on reducing the number of drug-related deaths and near-fatal drug poisonings. In some jurisdictions such as the UK, 'Patient Group Directions' allow for the supply or administration of a prescription medicine to a category of unnamed persons who meet specified requirements. This is in contrast to a prescription which requires the patient’s name. Irish medicines legislation contains a provision which has been used to allow for patient group directions within the Irish health service. In 2011 however legal advice raised questions about the legality of patient group directions under Irish law. A review of the relevant legislation is currently underway to look at new arrangements for the supply and administration of certain emergency medicines, including naloxone. The review will explore the feasibility of putting in place protocols similar to those in place for pre-hospital emergency care personnel, for other categories of persons to supply and administer naloxone under certain conditions. The Department hopes to complete this review, which will include a consultative process involving all the relevant stakeholders, by the end of 2014. The Misuse of Drugs legislation is currently being reviewed with the intention of introducing additional possession and prescription/dispensing controls on benzodiazepines and z-drugs which are the main prescription medicines being sold illicitly in Ireland and which are increasingly implicated in adverse events.

Lithuania	Since 2011, Lithuanian policy of prevention of drug addiction and drug control is implemented based on the National Programme on Drug Control and Prevention of Drug Addiction 2010–2016, which was adopted by the Parliament of the Republic of Lithuania on November 4th, 2010. The goal of the Programme is to impede and reduce illicit supply and demand of drugs and psychotropic substances and their precursors, the spread of drug addiction through the strengthening of individual and public education, health and safety. The non medical use of prescription medicines, containing narcotic and psychotropic substances, is therefore a part of the Strategy.Lithuanian Health Programme 2014-2025, which was adopted by the Parliament of the Republic of Lithuania on June 26th, 2014 focuses on dealing with addiction and dependence in general without mentioning specific substances.
Malta	Action 21: (National Drug Policy 2008) In order to actively involve civil society in the national efforts to reduce supply and demand for illicit drugs and prescription and non-prescription drugs for misuse, Government shall, through its entities including Sedqa, the Health Promotion Department, Health Centres, together with Youth Organisations, Professional Bodies, Local Councils, employers and trade unions, voluntary and private organisations, Parishes and the media, ensure that effective education campaigns are conducted to further disseminate information, raise awareness and educate the public in general and vulnerable groups in particular about: (a)the misuse/abuse of prescription and non-prescription medication and the physical, social, psychological and emotional effect that such misuse/abuse has on users, their significant others and the community at large; (b)the various types of illicit drugs and their effect on users, on their significant others and on the community at large; (c) the availability of professional services designed to promote the prevention of illicit drug use and misuse/ abuse of prescription and non-prescription medication and to facilitate the rehabilitation and reintegration/integration of drug users; (d)the role that society should play to promote a healthy lifestyle, prevent the use of illicit drugs and misuse/abuse of prescription and non-prescription medication, facilitate the integration of rehabilitated drug misusers and help them avert relapse; and (e)the benefits of suppressing the supply of and demand for drugs with a view to ideally eliminate the use of illicit drugs and misuse/abuse of prescription and nonprescription medication.
Morocco	Programme National de Lutte contre la Toxicomanie- Ministère de la Santé srvweb.sante.gov.ma
Serbia	National Strategy for drugs,2014/2021
Wales	The Welsh Government Substance Misuse Strategy ‘Working Together to Reduce Harm’ 2008-2018 makes references to:- The increase in misuse of prescription medicines amongst women who are victims of domestic abuse; Misuse of prescription only medicines, particularly anabolic steroids, primarily among males, and benzodiazepines.

The table below documents the difficulties country respondents encountered in the completion of the research tool and is a good indicator as to why some data may appear to be missing for some countries.

Table 20: Difficulties country respondents encountered in the completion of the research tool

Cyprus	In general population survey, there is no separation between medical and non-medical use of prescription drugs so that for many questions referring to the prevalence of use of medical and non medical prescription drugs we didn't provide an answer. Also for many sections, there is no option for negative answer.
Czech Republic	Not much space for any additional comments and explanations, especially in sections C, D, E.
Egypt	Paucity of studies done on gender issues in non-prescription drug use - Most of the drugs are obtained illegally, so data on registry of drugs aren't equivalent to the size of the problem
France	1) The data available in France are not always matching the questions of the questionnaire: Section A: The main health study in France in general population is only about the use of prescription drugs and doesn't concern the non medical use. The studies regarding the non medical use are made for specific groups like drug users, and concern principally OSTs. In these studies, the gender distribution was often not available. Section B: Two main studies explore the use of psychotropics in school age population, Espad (among school age children) and Escapad, among youths of 17 YO presenting themselves to the National Defence Day. Escapad is about the use of psychotropics (whether if they are taken with prescription or not) and gives a distribution by class of narcotic drugs. Espad explores the non medical use of psychtropics and doesn't give the distribution by class of narcotic drugs. For this reason, we choose to present Escapad as the first study lead in France, and add the available data of the Espad study in the second part of the section as other study regarding the non medical use of psychotropics. Section C: The treatment data come from the Recap Study (OFDT) done in treatment centers for drug users. The distribution between different classes of narcotic drugs doesn't allow to distinguish the prescription drugs out. Thus the data available regards the opioid, cocaïne and other substance group. 2) Some data are not published and not available. Sections C and F Data required in some sections are not already published. The amount of work to extract these data is too important and can't be given in a so short delay. For these reason, these section can't be filled now.
Germany	GPS among adults: - no distinction between opioid and non-opioid analgesics - no distinction between pharmacy medicines and prescription-only medicines - question on whether substances were prescribed by a medical doctor or not was only asked for people who have indicated having used substances within the past 30 days - information on non medical use of prescription drugs as defined in the present survey are not available; there are only information on the prevalence of misuse and dependence according to DSM-IV (for analgesics, hypnotics and sedatives) which have not been reported here (but could be reported if requested) Adolescents: - information only available for sedatives or tranquilizers and for the reference period lifetime Treatment data: - information on treatment only cover sedatives/hypnotics - numbers reported for NMUPD are prevalences of ICD-10 diagnoses harmful use or dependence (F13)

Greece	1. Data for several indicators (e.g., emergency departments, registered prescriptions) may be collected, albeit not in a systematic way. 2. Other data are not readily available in e.g., public databases or in scientific publications) and require special application for access. 3. Other data – on e.g., prevalence of use – may be publicly available but don't match the response categories of the present questionnaire (e.g., 36-37) and require additional analyses which are nonetheless subject to the special rules and resource capacities of the research institutes that hold the data.
Ireland	Section A: The data provided in response to questions 8-17 includes both 'medical' and 'non-medical' use of prescription drugs. It is not possible to break down the published data in the general population drug use prevalence survey in the manner requested by the survey. Section C: The national Hospital In-Patient Enquiry (HIPE) database collects data on discharged hospital patients, recording each diagnosis and procedure coded according to the ICD-10-AM. Unpublished HIPE data have been analysed to determine trends in non-fatal overdoses discharged from Irish hospitals in 2011: in that year there were 4,254 overdose cases. Question 47: it has been possible to use HIPE data to answer this question in relation to benzodiazepine non-fatal overdoses (960/4254), but the data do not include the ICD codes F11, F13 or F19 with the relevant subdivisions (.0 to .9). This information is the same source as for Question 52. The HIPE database does not include data relevant to questions 48-50. Section D: Question 51: This analysis is based only on ICD codes X41 and X61. The actual number that should have been entered in the field is '33.8 per million population in 2011 (latest available data) Section E: Question 53: while the NDTRS gets information from GPs, it does not receive information from general or psychiatric hospitals. However, the majority (over 50%) of substance misuse treatment is provided by specialist substance misuse treatment centres. Questions 54-57: The NDTRS is episode-based; duplication can only be controlled for within individual treatment centres. A case may be counted twice if treated more than once within the one calendar year but in different centres. Question 55: This data is for cases where NMUPD is the primary drug. Questions 54 & 57: Only limited control for double-counting can be made when controlling for percentage of clients presenting for treatment with NMUPDs in conjunction with other substances. Therefore, a small number of cases who have problem with two or more NMUPDs, in addition to other substances, may be counted twice. Section F: No comprehensive registration system of all prescriptions for controlled substances is in place. A nil response has been given in this section.
Israel	National surveys on drug use are not conducted regularly. The last survey was conducted in 2009 only in the 12-40 age group. National health surveys do not include questions about medical or non-medical use of prescription drugs. Data on prescription issued is collected, however it is not analyzed regularly. While collecting data for the survey we requested the pharmaceutical administration for the number of prescription of the medications in question. The data was not available at the time the survey had to be completed. HMO's collects the data on the number of issued prescription, as well as other relevant information but were inclined to share this information. Private pharmacies are not linked to a central database. Cause of death is coded according to ICD-10 but there is under-diagnosis of death from medication overdose. Only in the case of a suspicious cause of death routine toxicology tests are done. Deaths that are not investigated do not include routine drug tests. Emergency department visits are not recorded in a central database and are not collected. Toxicology tests are not routinely performed in the ED. When toxicology tests are performed the results >>>

	>>> are available after several days and therefore positive results are not recorded in the discharge code. Addiction treatment is not provided by a single authority. The Ministry of Social Services is not computerized. While collecting data for this survey I requested manual counting of patients. The average number of patient seeking treatment for prescription drug use disorder as the primary drug was about 1%. Patients using prescription with other drugs were about 10% of population seeking treatment. The ministry of health operates detoxification wards, 4 dual diagnosis wards inside psychiatric hospitals but the information system is old and does not specify the type of drug used or differentiate between medical and non-medical use and in not connected to a central database. Since no ambulatory addiction treatment is provided by the ministry of health and most patients with prescription drug use disorder do not see themselves as addicts and are reluctant to receive treatment with people who use illicit drugs they turn to private psychiatrists.
Italy	In Italy currently are not carried out detailed studies on the abuse of drugs, for this reason some data are not available.
Lebanon	The main difficulties reside in the fact that the data needed to fill this questionnaire is not always available. We don't have a lot of surveys done about this subject and some of the data collected by the ministry of health is still not published.
Lithuania	Majority of requested by survey information is not available, such data collection does not exist in the country. It is also inconvenient to fill pdf version of the questionnaire and then fill all the data again online. There's also a problem that in some places the exact numbers that one defines in pdf cannot be filled online as the input fields as such number formats are not accepted, e.g. you can fill whole numbers like "1", but not decimal like "1.4".
Malta	Due to survey restrictions in submitting percentages in decimal point (e.g. 0.3%), I was unable to respond to questions 54 to 57 of the questionnaire.
Morocco	Lack of data concerning NMUPD
Serbia	It is difficult to come up with precise data. There are several databases in different institutions that are not mutually compatible and connected (for instance Agency for Medicines and Medical Devices, Republic Fund for Health Insurance, Institute for Public Health "Milan Jovanovic Batut",etc). It is almost impossible to get the data by year of birth and specific diagnosis. Therefore, it is important to introduce appropriate way of recording information (data) in this field of research.
The Netherlands	In many cases, the specifically desired information is not described in the studies (in the same way). As a result, many questions could not be answered. Sometimes information is missing, sometimes information is described in other forms (e.g. percentages or absolute numbers), etc. The cited studies were (mostly) focused on the use of somnifacients and sedatives, not on prescription drugs in general.
Wales	Unable to save changes to the document whilst sourcing additional changes. Lack of consistency in the type of data required – eg. fatal overdose data specifies ICD-10 codes X41 and X61 but this omits some deaths relating to prescription only medicines and as a consequence may lead to underestimation of the impact of NMUPD. Also interchanging of prescription of prescription drugs and NMUPD terms perhaps not ensuring best use of available data where distinction regarding misuse is unclear. Prescription data is not available by gender or age in the UK.

Table 21: Reported Reliability and validity by respondents

Czech Republic	CZ has some data from different registers and surveys, but not in the same categories as in the questionnaire. This is the reason why we were not able to fulfill section C and data in section E are only from one of our register
Egypt	It has influenced the data available dramatically, i.e., it has influenced the availability of data about the size of the problem, but not its reliability or validity.
France	It is difficult to compare the different classes of psychotropics, OSTs are not taken into account in general population studies, as well as the non medical use of other narcotic drugs. – The distinction between use and non medical use is not given in most of the available studies. – Some of the indicators don't do the breakdown between illicit substances and prescription drugs (Recap data for example).
Germany	In many cases, the reported numbers do not fully represent the definitions requested. Consequently, the comparability with other countries can hardly be evaluated,
Greece	The difficulties did not influence the reliability/validity of the data reported but increased the no-responses in several indicators.
Ireland	Difficulties described under Question 66 above have imposed limitations on the conclusions that may be drawn from the available data - these limitations are detailed in responding to Question 66. Section F: an account is given here of two studies where researchers have used partial records on prescribing practices in Ireland to try and understand patterns of prescribing.
Israel	The data of medical and non-medical use are outdated. There is under-reporting and under-diagnosis of prescription drug use related morbidity and mortality. There is no reliable way to estimate the number of population seeking treatment.
Lebanon	I did not fill the parts where data wasn't available. For the rest the numbers can give us a pretty clear idea about the status in Lebanon.
Lithuania	Did not influence
Malta	Due to survey restrictions in submitting percentages in decimal point (e.g. 0.3%), I was unable to respond to questions 54 to 57 of the questionnaire.
Morocco	No evidence based policies
Serbia	We used only selected data that appear from several sources (confirmed data). This is the reason why some data is missing (or they are not very reliable or it is not possible to get it at this moment).
The Netherlands	The focus on somnifacients and sedatives and sedatives leads to an underestimation of the total (nonmedical) use of prescription drugs.
Wales	Data supplied is reliable and valid but the difficulties have led to submission of a very limited dataset.

Conclusions and Recommendations

4.1 Introduction

This chapter highlights the salient findings, revisits the limitations and proposes recommendations for research, policy and practice.

4.2 Conclusions

A number of conclusions may be reached from the review of the literature and the data submitted which clearly show **an important gender dimension** in relation to the phenomenon of NMUPD.

1) The literature review :
   - Identifies women as a high risk category for NMUPD.
   - Shows how gender is not predictive in the same direction across different drug categories of prescription drug use.
   - Highlights how the telescoping phenomenon is evident for females in their NMUPD career path and that females manifest different patterns of use then males.
   - highlights how trauma and interpersonal violence may be causal factors for NMUPD among women

2) The submitted data indicates that:
   - In the general population, the use of prescription drugs in lifetime, in the last 12 months and in the last 30 days is higher for females than for males.
   - Prescription drug use increases with age. The 30's are a period in one's lifetime where it becomes more likely that one is prescribed a psychotropic medication. Gender differences are minimal in this regard.
   - The current study was unable to come to any conclusions about gender influences on the use of a class of prescription medication.
   - While rates for prescription drug use have been shown to be clearly higher for women across most age groups and across time periods, the picture for NMUPD is somewhat less clear. While not many countries reported on NMUPD, the data submitted by the expert respondents shows that Greece

and Lithuania register higher levels of NMUPD for females while the opposite is true for Lebanon and Israel.

- The initiation into NMUPD is marginally later for females than for males.
- The most common source of prescription medication for both males and females is a licit one (from a doctor), followed by 'from a friend or a relative' indicating the relative ease of diversion.
- Youth survey data indicate that rates of NMUPD for lifetime are higher for females in a number of countries and age of onset appears to coincide with the period of middle adolescence.
- In Germany and Serbia the number of fatal overdoses related to the use of psychotropics is higher for females than for males.
- The data on treatment is too limited to make any reliable conclusions according to gender.
- EU member states conduct regular general population surveys that address the issue prescription drug use, while some of the Mediterranean countries do not.
- Disparity in the type of drug use surveyed in relation to prescription drug use and NMUPD makes comparison of prevalence rates particularly problematic. Information on CNS depressant use is more common than information on the use of opioids, CNS stimulants and other categories of prescription medication. This does not allow for a clear documentation of the full extent of NMUPD and does not allow researchers to highlight the differing rates of use of various psychotropic substances according to gender.
- General Population Surveys contain items enquiring about the use of a prescription medication but do not necessarily enquire about whether that use is in accordance with medical practice thereby classifying it as NMUPD.
- Not all the countries in the survey report on the source of the prescription drugs. Without this data differences in gender in relation to source cannot be extrapolated.
- Youth surveys, containing items on NMUPD, are widespread in Europe and the Mediterranean. A number of conclusions can be reached in regard to youth surveys.
  - The monitoring of the use of CNS depressants is more common than the monitoring of any other category of prescription medication.
  - While the monitoring of prescribing practices among young people is an important area of research, youth surveys in Europe mainly explore NMUPD. The literature highlights how prescription practices are influenced by gender, but this was not able to be investigated with the current data.
- All countries have legislation in place to control prescription drugs (psychotropics).
- Not all participating countries have a system in place to register the number of prescriptions for psychotropic substances and were unable to provide data in this regard.
- Participating countries reported a number of scientific studies on NMUPD providing a resource for researchers and policy makers.
- Most participating countries reported that the issue of NMUPD was addressed in their country's National Drugs Policy.

4.3 Limitations

- No standardised monitoring practice for NMUPD currently exists in Europe and the Mediterranean region.
- The study is the first of its kind and therefore exploratory in nature.
- Only descriptive statistics were able to be reported with the submitted data. Due to the source of the data being secondary statistics, no inferential analysis could to be effected to the data therefore allowing only for limited interpretation.
- The 17 participating countries are not representative of all the European and Mediterranean region, even if several geographical areas were represented in the study. .
- The analysis reflects the data submitted by the expert respondents nominated to participate by the Permanent Correspondents of the 36 member states of the Pompidou Group and of 5 MedNET countries or through direct contacts by the Pompidou Group Secretariat (Germany and the Netherlands). Altogether, data were reported from 17 countries.
- Extensive auditing work of the GPS questionnaires by the EMCDDA shows that the national data concerning the use and misuse of medicines among general populations is not comparable and should, therefore, be interpreted very cautiously.
- A number of the questionnaires were submitted as incomplete. Some of the submitted questionnaires featured a number of skipped items. The reasons for skipped items have been coded qualitatively into the following four categories:

  1. The data is not available in the particular country because it is not collected in that country.

  2. The data, although collected in the country, was not available in the format required by the research tool.

  3. The data, although collected in that country, was not accessible to the researcher in the time frame of the study. The required reporting might have needed additional analysis which was not possible for the expert respondent at the time of the survey.

  4. The nominated expert respondent did not have access to the data required by the research tool.

4.4 Recommendations

4.4.1 For monitoring and research:

The report recommends the Permanent Correspondents of the Pompidou Group to undertake the following actions:

- **Ask researchers** in their respective member states to contribute to the development of monitoring systems of general population drug use in those European and Mediterranean countries where they do not exist (with technical advice from the EMCDDA).
- **Recommend to researchers** in their respective countries that in addition to the use of 'sedatives and tranquillisers', the use of other categories of prescription medication be included as items in General Population Surveys.
- **Ask researchers** in their respective countries to ensure that the item on the source of the prescription medication is included in General Population Surveys as a core item.
- **Ask researchers** in the Member States to develop mechanisms for the monitoring of the Emergency Department indicator.

- **Ask the EMCDDA** to include, in the common core general population survey, items relating to the use of prescription medication and to the non medical use of prescription medication and that the defining and reporting on the extent of NMUPD becomes a priority.
- **Ask the EMCDDA** to develop a clear method of distinguishing the monitoring of both prescription practices and NMUPD.
- **Ask the ESPAD** to expand the categories of prescription drugs monitored and to consider including 'prescription drug use' not only 'use without a prescription'.

4.4.2 For practice (prevention and treatment):

The report recommends the Permanent Correspondents of the Pompidou Group to undertake the following actions:

- **Ask Member States** to offer differentiated responses to the different needs of women in relation to prevention, harm reduction and treatment.
- **Ask Member States** to develop guidelines for prescription practices that, while securing that individuals who need psychotropic medication, for the relief of pain, for example, have access to it, this does not result in unnecessary prescription and potential diversion of controlled substances.
- **Ask Member States** to develop educational programs targeted towards patients on how to safely use, store and dispose of prescribed medicines.
- **Ask Member States** to train medical practitioners to be able to screen and identify those individuals who are at risk of dependence to hinder movement along the addictive career.

4.4.3 For policy:

The report recommends the Permanent Correspondents of the Pompidou Group to undertake the following actions:

- **Ask Member States** to develop coherent policies that also address the use and misuse of prescription medications and make specific reference to gender.
- **Ask Member States** to commission studies dedicated exclusively to NMUPD and addressing such specific issues as the initiation, escalation, physical and psychosocial consequences in relation to women as an 'at risk' category.
- **Ask Member States** to develop state level prescription drug monitoring programs.
- **Ask Member States** to develop educational programs targeted towards patients on how to safely use, store and dispose of prescribed medicines.

4.4.4 After consultation by the PG Secretariat, the Gender Equality Commission Secretariat suggests:

- **Asking Member States** to further explore the relationship between experiences of physical, sexual and psychological violence and NMPUD based on the fact that "women may be more likely to use substances to medicate emotional distress which may be emanating from the presence of violence in their lives. Intercultural evidence exists to support the association between addiction and interpersonal violence (physical, sexual and emotional) in the lives of women around the world (UNODC, 2004)

- **Asking Member States** to hold a round table bringing together international organisations active in the field to present their practices/good examples on this issue
- **Asking Member States** to commission studies dedicated exclusively to NMPUD and addressing such specific issues as the initiation, escalation, physical and psychosocial consequences in relation to women as an “at risk category”.
- **Asking Member States** to commission a study on the relationship between Violence against Women and NMPUD.

5

References

- Alonso, J., Angermeyer, M. C., Bernert, S., et al. (2004). Use of mental health services in Europe: results from the European Study of the Epidemiology of Mental Disorders (ESEMeD) Project. *Acta Psychiatrica Scandinavica,* 109 (420), 47– 54.
- American College of Obstetricians and Gynecologists. (2012). Committee opinion no. 538: Nonmedical use of prescription drugs. *Obstetrics & Gynecology,* 120(4), 977-982.
- Ashrafioun, L., Dambra, C.M., & Blondell, R.D. (2011). Parental prescription opioid abuse and the impact on children. *American Journal of Drug and Alcohol Abuse,* 37(6):532-536.
- Back, S. E., Lawson, K. M., Singleton, L. M., & Brady, K. T. (2011). Characteristics and correlates of men and women with prescription opioid dependence. *Addictive Behaviors, 36,* 829-834.
- Back, S. E., Payne, R. A., Simpson, A. N., & Brady, K. T. (2010). Gender and prescription opioids: Findings from the National Survey on Drug Use and Health. *Addictive Behaviors, 35,* 1001-1007.
- Back, S. E., Payne, R. A., Waldrop, A. E., Smith, A., Reeves, S., & Brady, K. T. (2009). Prescription opioid aberrant behaviors: A pilot study of sex differences. *The Clinical Journal of Pain, 25*(6), 477−484.
- Back, S., Contini, R., Brady, K. (2006). Substance Abuse in Women: Does Gender Matter? *Psychiatric Times.* Available at: http://tinyurl.com/adu4pnk.
- Banta-Green, C., Merrill, J., Doyle, S., Boudreau, D., & Calsyn, D. (2009). Opioid use behaviors, mental health and pain-Development of a typology of chronic pain patients. *Drug Alcohol Depend, 104*(1-2):34-42.
- Barnard, M., & McKeganey, N. (2004). The impact of parental problem drug use on children: what is the problem and what can be done to help?. *Addiction,99*(5), 552-559.
- Benotsch, E. G., Zimmerman, R., Cathers, L., McNulty, S., Pierce, J., Heck, T., et al. (2013).Non medical use of prescription drugs, polysubstance use, and mental health intransgender adults.Drug and Alcohol Dependence (132)393 394. http://dx.doi.org/ 10.1016/j.drugalcdep.2013.02.027
- Brady, K.T & Randall C,L. (1999). Gender differences in substance use disorders. *Psychiatric Clinics of North America; 22*(2): 241–52.
- Brenton, J., & Elliott, S. (2013). Undoing gender? The case of complementary and alternative medicine. *Sociology of Health & Illness,* 36(1), 91-107.
- Casati A, Sederfov R, Pfeiffer-Gerschel T.(2012) Misuse of medicines in the European Union: a systematic review of the literature. *Eur Addict Res.*18:228-45.
- Clark, M. (2011). Conceptualising addiction: How useful is the construct? *International Journal of Humanities and Social Science,* 1(13):55-63.

- Clark, M. (2012). Shaming and community reactions to offending in a Mediterranean society: a Maltese case study. *Journal of Mediterranean Studies,* 21(1).
- Compton, W. M., & Volkow, N. D. (2006). Major increases in opioid analgesic abuse in the United States: concerns and strategies. *Drug Alcohol Depend., 81*(2):103-7.
- Cooke CG, Kelley ML, Fals-Stewart W, Golden J. 2004. A comparison of the psychosocial functioning of children with drug- versus alcohol-dependent fathers. *The American Journal of Drug and Alcohol Abuse;* 30:695–710.
- Crosby, R.A., & Pitts, N.L. (2007). Caught between different worlds: how transgendered women may be "forced" into risky sex. *J. Sex Res., 44,* pp. 43–48.
- DAWN, 1998 Drug Abuse Warning Network [DAWN]. 1998. 1997 *Annual Report*. Washington. DC: Substance Abuse and Mental Health Services Association. Department of Health and Human Services.
- Dollar, C. B. & Ray, B. (2013). Adult nonmedical prescription drug use: An examination of bond theory. *Deviant Behaviour, 34*(11), 932-949.
- EMCDDA (2006) Annual Report Selected Issues. Luxembourg: Office for official Publications of the European Communities
- EMCDDA *Annual Report 2009.* Accessed at: www.emcdda.europa.eu/publications/annual-report
- EMCDDA A supplement to the 2011 ESPAD Report available on http://www.espad.org/Uploads/ESPAD_reports/2011/SUMMARY%20-%20Supplement%20to%20The%202011%20ESPAD%20Report%20-%20WEB.pdf
- Fischer, B., Rehm, J., & Gittins, J. (2009). An overview of non-medical use of prescription drugs and criminal justice issues in Canada. *Department of Justice Canada.* Retrieved from http://publications.gc.ca/collections/collection_2014/jus/J4-31-2013-eng.pdf
- Fishbain, D.A., Rosomoff, H.L., Rosomoff, R.S., 1992. Drug abuse,dependence and addiction in chronic pain patients. *Clin. J. Pain* 8,77–85
- Ford, J. A. (2008). Social learning theory and nonmedical prescription drug use among adolescents. *Sociological Spectrum, 28,* 299-316.
- Garnier-Dykstra, L., Caldeira, K., Vincent, K., O'Grady, K., & Arria, A. (2012). Nonmedical use of prescription stimulants during college: Four-year trends in exposure opportunity, use, motives, and sources. *Journal of American College Health, 60*(3), 226-234.
- Gear, R. W., Miaskowski, C., Gordon, N. C., Paul, S. M., Heller, P. H., & Levine, J. D. (1996). Kappa-opioids produce significantly greater analgesia in women than in men. *Nature Medicine, 2*(11), 1248–1250.
- Goldman, L. S., Genel, M., Bezman, R. J., & Slanetz, P. J. (1998). Diagnosis and treatment of attention-deficit/hyperactivity disorder in children and adolescents. Council on Scientific Affairs, American Medical Association. *Journal of the American Medical Association, 279*(14):1100–07.
- Greenfield, S. F., Back, S. E., Lawson, K., Brad, K. T. (2010). Substance abuse in women. *Psychiatr Clin North Am, 33*(2): 339–355.
- Greenfield, S. F., Brooks, A. J., Gordon, S. M., Green, C. A., Kropp, F., McHugh, R. K., ... & Miele, G. M. (2007). Substance abuse treatment entry, retention, and outcome in women: A review of the literature. *Drug and alcohol dependence, 86*(1), 1-21.
- Greenhill, L. L., Pliszka, S., Dulcan, M. K., Bernet, W., Arnold, V., Beitchman, J., Benson, R. S., Bukstein, O., Kinlan, J., McClellan, J., Rue, D., Shaw, J. A., & Stock, S. (2002). Practice parameter for the use of stimulant medications in the treatment of children, adolescents, and adults. *Journal of the American Academy of Child and Adolescent Psychiatry, 41*(2 Suppl):26S–49S.

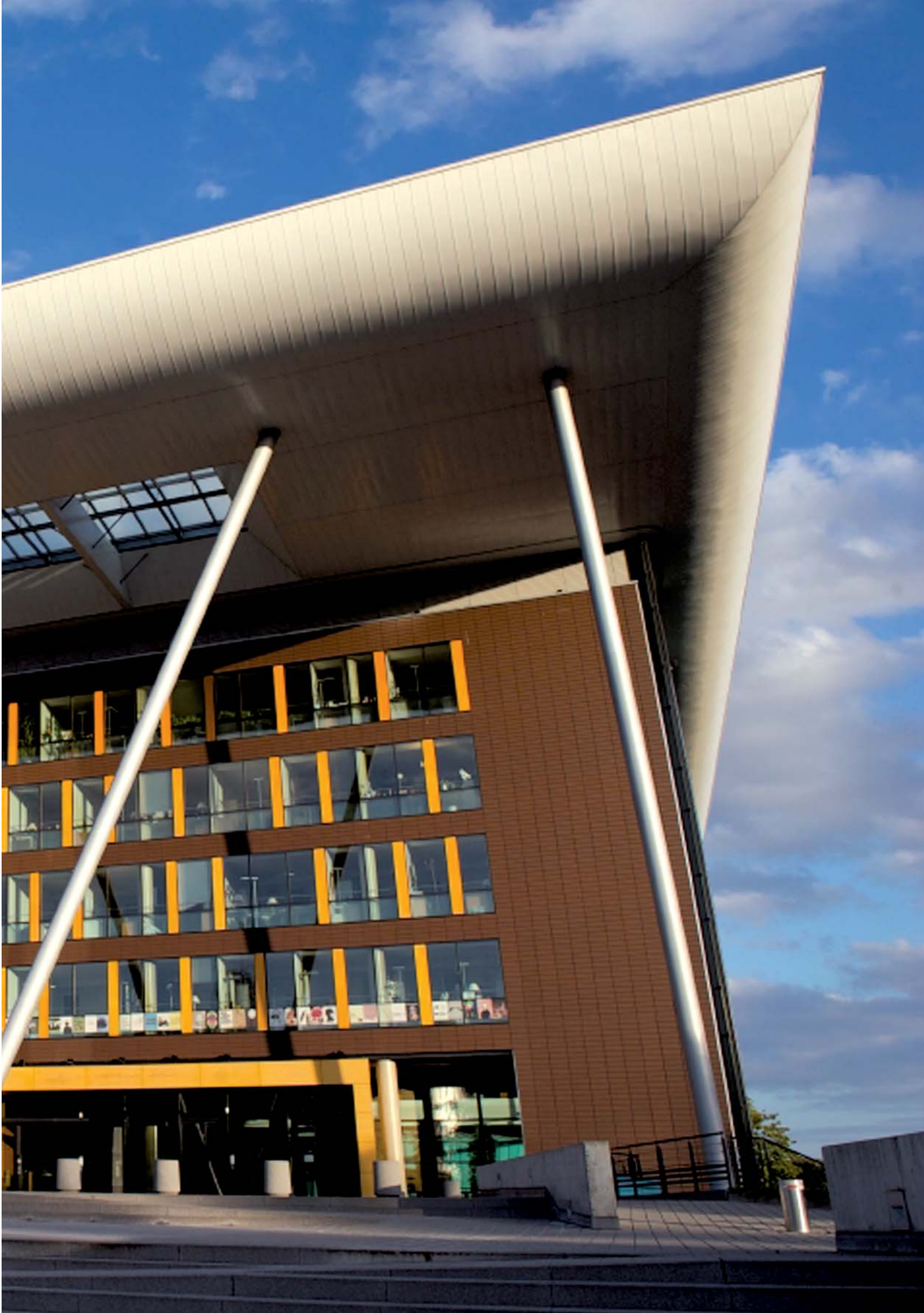
- Grella, C. E., Karno, M. P., Warda, U. S., Niv, N., & Moore, A. (2009). Gender and comorbidity among individuals with opioid use disorders in the NESARC study. *Addictive Behaviours, 34,* 498-504.
- Haas, A.P., M. Eliason, M., Mays, V.M., Mathy, R.M., Cochran, S.D., D'Augelli, A.R., Silverman, M.M., Fisher, P.W., Hughes, T., Rosario, M., Russell, S.T., Malley, E., Reed, J., Litts, D.A., Haller, E., Sell, R.L., Remafedi, G., Bradford, J., Beautrais, A.L., Brown, G.K., Diamond, G.M., Friedman, M.S., Garofalo, R., Turner, M.S., Hollibaugh, A., & Clayton P.J. (2011). Suicide and suicide risk in lesbian, gay, bisexual, and transgender populations: review and recommendations. *J. Homosex., 58,* pp. 10–51
- Havens, J. R., Young, A. M., & Havens, C. E. (2011). Nonmedical prescription drug use in a nationally representative sample of adolescents: evidence of greater use among rural adolescents. *Arch Pediatr Adolesc Med,* 165(3), 250-255
- Haydon E, Monga N, Rehm J, Adlaf E, Fischer B. (2005) Prescription drug abuse in Canada and the diversion of prescription drugs into the illicit drug market. *Canadian Journal of Public Health*.2005;96: 459–461
- Hecksher, D. & Hesse, M. (2009) Women and Substance Use Disorders Women's Issues Vol 7 (1) 50-62.
- Hernandez-Avila, C. A., Rounsaville, B. J., & Kranzler, H. R. (2004). Opioid-, cannabis- and alcohol-dependent women show more rapid progression to substance abuse treatment. *Drug and Alcohol Dependence, 74*, 265−272.
- Herbst, J.H., Jacobs, E.D., Finlayson, T.J., McKleroy, V.S., & Spink Neumann, M. (2008). Estimating HIV prevalence and risk behaviors of transgender persons in the United States: a systematic review. *AIDS Behav., 12*, pp. 1–17
- Homish, G. , Leonard, K. and Cornelius, J. (2010) Individual, partner and relationship factors associated with non medical use of prescription drugs Addiction 105 (8) 1457- 1465.
- Hser, Y. I., Joshi, V., Maglione, M., Chou, C. P., & Anglin, M. D. (2001). Effects of program and patient characteristics on retention of drug treatment patients. *Evaluation and Program Planning,* 24(4), 331-341.
- Huang B, Dawson D, Stinson F, Hasin D, Ruan W, Saha T, et al. Prevalence, Correlates, and Comorbidity of Nonmedical Prescription Drug Use and Drug Use Disorders in the United States: Results of the National Epidemiologic Survey on Alcohol and Related. Journal of Clinical Psychiatry.2006;67(7):1062–1073
- Hughes, P. H., Coletti, S. D., Neri, R. L., Urmann, C. F., Stahl, S., Sicilian, D. M., & Anthony, J. C. (1995). Retaining cocaine-abusing women in a therapeutic community: the effect of a child live-in program. *American Journal of Public Health, 85*(8_Pt_1), 1149-1152.
- Licata, S,& Rowlett, L (2008) Abuse and dependence liability of benzodiazepine-type drugs: GABA(A) receptor modulation and beyond. JKPharmacol Biochem Behav. 90(1):74-89.
- International Harm Reduction Development Program (IHRD) (2007), *Women, Harm Reduction, and HIV*, Open Society Institute Public Health Program, New York, Available from: http://www.idpc.net/sites/default/files/library/IHRD_WomenHRHIV_EN.pdf
- Isaacson, H., Hopper, J., Alford, D., Parran, T., et al. (2005). Prescription drug use and abuse. *Postgraduate Medicine,* 118(1),19-26
- Isralowitz, R., Reznik, A., & Straussner, S. L. (2011). Prescription drug use trends among Israeli school dropouts: An analysis of gender and country of origin. *Journal of Social Work Practice in the Addictions, 11*, 75-86.
- Jamison, R. N., Butler, S. F., Budman, S. H., Edwards, R., & Wasan, A. D. (2010). Gender differences in risk factors for aberrant prescription opioid use. *Journal of Pain, 11, 312–320.*
- Johnston, L. D., O'Malley, P. M., & Bachman, J. G. (2003). Monitoring the Future National Survey Results on Drug Use, 1975–2002. Volume II: College Students and Adults Ages 19–40. NIH Publication 03-5376. Bethesda, Maryland: National Institute on Drug Abuse.

- Johnston, L. D., O'Malley, P. M., & Bachman, J. G. (2003). Monitoring the Future National Survey Results on Drug Use, 1975–2002: Vol. I. Secondary School Students (NIH publication 03-5375) Washington, D.C.: US Department of Health and Human Services.
- Kaltenbach, K., Berghella, V., & Finnegan, L. (1998). Opioid dependence during pregnancy. *Substance Abuse in Pregnancy; 25*:139–151.
- Kecojevic, A., Wong, C.F., Shrager, S.M., Silva, K., Jackson Bloom, J., Iverson, E., & Lankenau, S.E. (2012). Initiation into prescription drug misuse: differences between lesbian, gay, bisexual, transgender (LGBT) and heterosexual high-risk young adults in Los Angeles and New York. *Addict. Behav., 37* (2012), pp. 1289–1293
- Kelly, B.C. & Parsons, J.T. (2010). Prevalence and predictors of non-medical prescription drug use among men who have sex with men. *Addict. Behav., 35* (2010), pp. 312–317
- Keyes, K. M., Li, G., & Hasin, D. S. (2011). Birth cohort effects and gender differences in alcohol epidemiology: a review and synthesis. *Alcoholism: Clinical and Experimental Research, 35*(12), 2101-2112
- Kilpatrick, D.G., Resnick, H.S., & Acierno, R. (1997). Health Impact of Interpersonal Violence. Section III: Policy Implications. *Behavioral Medicine,* 23, 65-78.
- Kollins, S. H., MacDonald, E. K., & Rush, C. R. (2001). Assessing the abuse potential of methylphenidate in nonhuman and human subjects: A review. *Pharmacology, Biochemistry, and Behavior, 68*(3):611–27.
- Kosten, T. R., George, T.P. (2002). The neurobiology of opioid dependence: implications for treatment. *Sci Pract Perspect;* 1(1):13-20.
- Kubiak, S. P., Arfken, C. L., Boyd, C. and Cortina, L. M. (2006), More Severe Violence Exposure Associated with Poly-Pharmaceutical Use. *The American Journal on Addictions,* 15: 457–461. doi: 10.1080/10550490600998583
- Lanier, C., & Farley, E. J. (2011). What matters most? Assessing the influence of demographic characteristics, college-specific risk factors, and poly-drug use on nonmedical prescription drug use. *Journal of American College Health,59*(8), 721-727.
- Lawrence, A.A. (2008). Gender identity disorders in adults: diagnosis and treatment. D.L. Rowland, L. Incrocci (Eds.), *Handbook of Sexual and Gender Identity Disorders,* Wiley, New York (2008), pp. 423–456
- Levenson, R. W., Oyama, O. N., & Meek, P. S. (1987). Greater reinforcement from alcohol for those at risk: Parental risk, personality risk, and sex. *Journal of Abnormal Psychology, 96*(3), 242.
- Lithuanian Presidency of the Council of the EU, (2013) *Misuse of prescribed medicines: a basis for common understanding. Policy review of challenges and responses* EC
- Lo, C., Monge, A. N., Howell, B. J., & Cheng, T. C. (2013). The role of mental illness in alcohol abuse and prescription drug misuse: Gender-specific analysis of college students. *Journal of Psychoactive Drugs, 45*(1), 39-47.
- Lohse, M., Lorenzen A, & Müller-Oerlinghausen, B. (2004): Psychopharmaka. In Arzneiverordnungsreport 2005 Edited by: Schwabe U, Pfaffrath D.Aktuelle Daten, Kosten, Trends und Kommentare, Springer: Berlin;
- Lookatch, S., Moore, T., & Katz, E. (2014). Effects of gender and motivations on perceptions of nonmedical use of prescription stimulants. *Journal of American College Health*. doi: 10.1080/07448481.2014.891593
- Manchikanti L. (2007) National drug control policy and prescription drug abuse: facts and fallacies. *Pain Physician* 10(3):399-424.
- McCabe, S. E., Knight, J. R., Teter, C. J., & Weshsler, H. (2005). Nonmedical use of prescription stimulants among US college students: Prevalence and correlates from a national survey. *Addiction, 99*, 96–106.

- McCabe, S. E., Teter, C. J., & Boyd, C. J. (2006). Medical use, illicit use, and diversion of abusable prescription drugs. *Journal of American College Health, 54*, 269–278.
- McHugh, K., DeVito, E., Dodd, D., Carroll, K. M., Potter, J. S., Greenfield, S. F., &Weiss, R. D. (2013). Gender differences in a clinical trial for prescription opioid dependence. *Journal of Substance Abuse Treatment, 45*, 38-43.
- Miller, W. R. & Cervantes, E. A. (1997), Gender and patterns of alcohol problems: Pretreatment responses of women and men to the comprehensive drinker profile. *J. Clin. Psychol., 53*: 263–277.
- Miranda, R., Meyerson, L. A., Long, P. J., Marx, B. P., & Simpson, S. M. (2002). Sexual assault and alcohol use: Exploring the self-medication hypothesis. *Violence and Victims, 17*(2), 205-217.
- Morasco, B. J., & Dobscha, S. K. (2008). Prescription medication misuse and substance use disorder in VA primary care patients with chronic pain. *General hospital psychiatry, 30*(2), 93-99.
- Morash, M., Haarr, R. N., & Rucker, L. (1994). A comparison of programming for women and men in US prisons in the 1980s. *Crime & Delinquency, 40*(2), 197-221.
- Muisener, P. P. (1994). SAGE Sourcebooks for the Human Services Series: *Understanding and treating adolescent substance abuse.* (Vols. 1-27). Thousand Oaks, CA: SAGE Publications, Inc. doi: http://dx.doi.org/10.4135/9781452232997
- Myers, B., Siegfried, N., and Parry, C. D. H. (2003). Over-the-counter and prescription medicine misuse in Cape Town-findings from specialist treatment centres. South African Medical Journal, 93(5): 367-370.
- Olfson, M., Gameroff, M. J., Marcus, S. C., & Jensen, P. S. (2003). National trends in the treatment of attention deficit hyperactivity disorder. *American Journal of Psychiatry, 160*(6):1071–77
- Pfeiffer-Gerschel (2010) http://www.unodc.org/docs/treatment/PDmtg/Pfeiffer-Gerschel_Vienna_2010.pdf
- Pilkinton, M. & Cannatella, A. (2012). Nonmedical use of prescription stimulants: Age, race, gender, and educational attainment patterns. *Journal of Human Behaviour in the Social Environment, 22*, 409-420.
- Resnick, M. D., Bearman, P. S., Blum, R. W., Bauman, K. E., Harris, K. M., Jones, J.,& Udry, J. R. (1997). Protecting adolescents from harm: findings from the National Longitudinal Study on Adolescent Health. *Jama, 278*(10), 823-832.
- Rigg, K. & Ibanez, G. E. (2010). Motivations for non-medical prescription drug use: A mixed methods analysis. *Journal of Substance Abuse Treatment, 39*, 236-247.
- Robison, L. M., Sclar, D. A., Skaer, T. L., & Galin, R. S. (1999). National trends in the prevalence of attention-deficit/hyperactivity disorder and the prescribing of methylphenidate among school-age children: 1990–1995. *Clinical Pediatrics, 38*(4):209–17
- Robison, L. M., Skaer, T. L., Sclar, D. A., & Galin, R. S. (2002). Is attention deficit hyperactivity disorder increasing among girls in the US? Trends in diagnosis and the prescribing of stimulants. CNS Drugs, 16(2):129–37.
- Safer, D. J., Zito, J. M., & Fine, E. M. (1996). Increased methylphenidate usage for attention deficit disorder in the 1990s. Pediatrics, 98(6 Pt 1):1084–88
- SAHMSA 2002 National Survey on Drug Use and Health. Results from the 2001 National Survey on Drug Use and Health: Volume I. Summary of National Findings. U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES Substance Abuse and Mental Health Services Administration Office of Applied Studies
- SAHMSA 2006 National Survey on Drug Use and Health. Results from the 2006 National Survey on Drug Use and Health: Volume I. Summary of National Findings. U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES Substance Abuse and Mental Health Services Administration Office of Applied Studies

- SAHMSA 2007 National Survey on Drug Use and Health. Results from the 2007 National Survey on Drug Use and Health: Volume I. Summary of National Findings. U.S. Department of Health And Human Services Substance Abuse and Mental Health Services Administration Office of Applied Studies retrieved from http://oas.samhsa.gov/nsduh/reports.htm#2k7
- SAHMSA 2008 National Survey on Drug Use and Health. Results from the 2008 National Survey on Drug Use and Health: Volume I. Summary of National Findings. U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES Substance Abuse and Mental Health Services Administration Office of Applied Studies retrieved from http://ncadistore.samhsa.gov/catalog/productDetails.aspx? ProductID=17934
- SAHMSA 2009 National Survey on Drug Use and Health. Results from the 2009 National Survey on Drug Use and Health: Volume I. Summary of National Findings. U.S. Department of Health And Human Services Substance Abuse and Mental Health Services Administration Office of Applied Studies retrieved from http://oas.samhsa.gov/NSDUH/2k9NSDUH/2k9Results.htm
- Santrock, J. (2011) *Adolescence* USA: McGraw Hill.
- Schepis, T. S., & Krishnan-Sarin, S. (2008). Characterizing adolescent prescription misusers: a population-based study. *Journal of the American Academy of Child & Adolescent Psychiatry, 47*(7), 745-754.
- Seppala, M. D., & Berge, K. H. (2010). The addicted physician. A rational response to an irrational disease. *Minnesota medicine, 93*(2), 46-49.
- Sigmon SC. Characterizing the emerging population of prescription opioid abusers. Am *J Addict.*2006;15(3):208–212
- Simoni-Wastila, L. (2000). The use of abusable prescription drugs: The role of gender. *Journal of Women's Health and Gender-Based Medicine, 9*(3), 289–297.
- Simoni-Wastila, L., Ritter, G., & Strickler, G. (2004). Gender and other factors associated with the nonmedical use of abusable prescription drugs. *Substance Use and Misuse, 39*(1), 1-23.
- Smith, M. & Farah, M. (2011) Are Prescription Stimulants "Smart Pills"?The Epidemiology and Cognitive Neuroscience of Prescription Stimulant Use by Normal Healthy Individuals *Psychological Bulletin*: American Psychological Association
- Stewart, S. H., & Conrod, P. J. (2003). Psychosocial models of functional associations between posttraumatic stress disorder and substance use disorder.
- Sturza, M. L., & Campbell, R. (2005). An exploratory study of rape survivors 'prescription drug use as a means of coping with sexual assault. *Psychology of Women Quarterly, 29*(4), 353-363.
- Sung, H., Richter, L., Vaughan, R., Johnson, P. B., & Thom, B. (2005). Nonmedical use of prescription Opioids among teenagers in the United States: Trends and correlates. *Journal of Adolescent Health, 37,* 44–51.
- Teter, C. J., McCabe, S. E., LaGrange, K., Cranford, J. A., & Boyd, C. J. (2006). Illicit use of specific prescription stimulants among college students: Prevalence, motives, and routes of administration. *Pharmacotherapy, 26*, 1501–1510.
- Tetrault, J. M., Desai, R. A., Becker, W. C., Fiellin, D. A., Concato, J., & Sullivan, L. E. (2007). Gender and non-medical use of prescription opioids: Results from a national US survey. *Addiction, 103*, 258-268.
- UNODC (2011) The Non Medical Use of Prescription Drugs: Policy direction issues, UNODC: Vienna.
- Viana, A. G., Trent, L., Tull, M. T., Heiden, L., Damon, J. D., Hight, T. L., & Young, J. (2012). Non-medical use of prescription drugs among Mississipi youth: Constitutional, psychological, and family factors. *Addictive Behaviours, 37*, 1382-1388.
- Webster, L.R., & Dove, B. (2007). *Avoiding Opioid Abuse While Managing Pain: A Guide for Practitioners.* North Branch, MN: Sunrise River Press.

- Webster, L. & Webster, R. (2005) Predicting aberrant behaviours in opioid-treated patients: preliminary validation of the Opioid Risk Tool *Pain Med.* ;6(6):432-42.
- Warner, M., Chen, L. & Makuc, D. (2009) Increase in fatal poisonings involving opioid analgesics in the United States, 1999-2006. National Center for Health Statistics. Data brief, no 22.
- Women's Health Council. (2009). *Women and substance misuse: Drug misuse and women's health in Ireland.* Dublin: Women's Health Council. Retrieved from http://www.drugs.ie/resourcesfiles/research/2009/WHC_women_substance_misuse_-_health.pdf
- Wu, L. et al (2007) Misuse of methamphetamine and prescription stimulants among youths and young adults in the community. Drug AlcoholDepend., 89(2-3): 195-205
- Zenker, C. (2005). [Addiction and gender]. *Bundesgesundheitsblatt Gesundheitsforschung Gesundheitsschutz, 48*(4):469-76
- Zullig, K & Divin, A. (2012) The association between non-medical prescription drug use, depressive symptoms, and suicidality among college students. *Addict Behav*18; 37(8):890-9



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