

## Chapter 5

# Lessons learned, strengths, limitations, future directions and final thoughts

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Harmful use of drugs and alcohol are a major public health problem worldwide. In fact, there is an increased concern voiced about the emergence alcohol and drug problems in the world, in general, and in the Middle East specifically. Despite numerous cultural, social, religious, and legal prohibitions against substance use and extremely punitive laws across Arabian countries, the problem of the alcohol and substance misuse exist and appears to be gradually increasing more than acknowledged, suggesting a rise in the overall number of cases.

Despite strong religious censure, cultural disapproval and the illegal nature of drug trafficking, the UAE are not insulated from the global epidemic that is substance use disorder. The increase in the prevalence of the problem can be attributed to various factors including the geographical location of the UAE. The country location borders southwest Asia, positioning it on the route between the countries that cultivate and produce illicit substances and the worldwide consumer market. Based on the 2014 world drug report, the UAE is a primary transit country for air trafficking of illicit substances, playing a key role in the global distribution of narcotics (United Nations Office on Drugs and Crime (UNODC) World Drug Report 2014. The rapid population growth and social drift are other contributing factors, primarily affecting the younger population.

The United Arab Emirates (UAE) is one of the developing countries in which drug abuse seems to be on the increase, and there is concern it could become a serious problem in the future. Many aspects of life have changed quite rapidly since the independence of the UAE in 1971. There are various opportunities for drug trafficking, given its geographical location, i.e., proximity to opiate-producing countries, long land borders and extensive international air connections.

The rapid population growth in the UAE has resulted in a predominately young population, coupled with immense social change and accompanying stressors, highlighting the importance and urgency of exploring the substance abuse situation in the country and the identification of the needs for future research both prevention and treatment.

The proliferation of the poly-substance use disorder is posing an increasing risk to public health in the UAE. There is an increasing rise in the use of pharmaceutical opioid and prescribed medications in the UAE population. With only limited information on the potential harm caused by this pattern of substance use, there will be an increase in the demand for data to describe the specific nature of these trends towards improving targeted prevention strategies with effective medical intervention

This was the reason why I chose this area of study. From a public health point of view, I wanted to establish a baseline dataset that could be used to monitor changing trends in the future. My original research questions were as follows:

1. Are drug abuse and alcohol abuse major problems in the U.A.E?
2. What are the characteristics/socio-demographic features of those clients?
3. What are the possible factors associated with the increase of drug abuse in the U.A.E.?

4. What are the factors associated with alcohol and drug abuse?
6. What types of drug are commonly reported?
7. What are the relationships between demographic characteristics such: age, ethnic group, marital status, education, living situation, job, age of initiation, etc., and the use of drugs?
8. How can we compare our data with regional and global data?

At the end of the study, I feel I have managed to answer some of the above questions and some only partially. This has been both disappointing at times but it has definitely been a learning experience. If I was to start this process again, I will certainly do some things differently. Because of the nature and limitations of the data, it was decided to analyze and present the findings in the form of three independent papers. This helped to maintain a focus and compare the findings with the available literature.

The first paper presents a descriptive analysis of the patient population, giving a profile of the male population who received treatment at the National Rehabilitation Center in Abu Dhabi over a 10-year period. The second paper looks at factors associated with good outcomes in this population. The third paper focus on factors predicting relapse in this population. Together, they provide some empirical evidence on the current issues of substance use in the UAE.

To begin to answer to the first question: **Are drug abuse and alcohol abuse, major problems in the U.A.E?**

It is clear from the increasing trend in admissions to the NRC that substance abuse is a growing problem. In the decade after the period of data analysis the number of referrals has more than

doubled. To answer the question, does a major epidemiological study need to be conducted? A household survey would be the best methodology for such a study. The data from the NRC should contribute to building up a nationwide prevalence estimate. A recent situational analysis (snapshot) study carried out by the NRC should also contribute to this. The study was a joint project between the NRC and UNODC in Geneva. The study was an assessment and evaluation of the current situation of substance abuse in the UAE and its economic burden.

The answer to the second question, **what are the characteristics/socio-demographic features of those clients?**

The study provides data to answer this question and has made available baseline data on the Emirati male patient population. For example, the patients were aged between 16 and 66 years, with an average age of 32.4 years (SD= 9.6). Forty-two percent were married, 44% were single and 13% were divorced. Sixty percent of patients were unemployed and 33.2% were either employed or students. About 51% did not reach secondary education, 33% had secondary education, and 16% had a post-secondary education. It is now possible to compare data on an annual basis to work out trends that should help in service planning and policy development. Baseline data on a female population is now needed as there were no female patients at the NRC during the period of this study.

Regarding the third question: **What are the possible factors associated with the increase of drug abuse in the U.A.E.?**

It is difficult to say that the study answered this question but a change in the main drugs of abuse reported over the period under consideration indicates that different drugs become available probably because of smuggling early on. The increase in use of prescription drugs in recent years may be because of lack of awareness of physicians of the abuse potential of these drugs and the lack of a system of prescription monitoring in the UAE. What types of drug are abused?

The study was able to answer this question and chart changes in trends of drugs reportedly used. For example, the main reported substance of abuse was alcohol in 41% (n=233). Other abused substances include heroin 16.2% (n=93), marijuana 12% (n=68), benzodiazepines 6.3% (n=36), inhalants 2.1% (n=12), amphetamines 2.8% (n=16), and other substances 20.1% (n=115), including prescription drugs, e.g., pain killers such as tramadol, methadone, codeine), sedatives such as xanax and valium, and other poly-substances such as kemadrine, artane and khat.

Abuse of alcohol, heroin, and marijuana had also increased over time, but at a lower rate than poly-substance abuse. Poly-substance use (abuse of three or more substances simultaneously) had sharply increased since 2009.

**What are the relationships between demographic characteristics such as age, ethnic group, marital status, education, living situation, job, age of initiation, etc., and the use of drugs?**

This question was partially answered in this dissertation. For example, the outcome data showed that marital status is associated with treatment outcomes, that married individuals or individuals in a stable relationship tend to show better outcome than the single or divorced. Extra support, care, and closer monitoring are possible explanations of these findings.

In addition, employed individuals have better outcomes and unemployment was one of the main factors associated with relapse or poor outcomes. This again could indicate that the individual has more resources. Employment also gives structure to the individual; employment before coming into treatment could add further motivation for recovery.

Mental health problems have been associated with poorer outcome. Mental health problems are associated with poorer outcomes in substance use treatment.

### **How do our data compare with regional and global data?**

This was addressed in Chapter 2 and the data seems comparable to the available data from the region. The template derived for the data collection should form the basis of a surveillance system for the UAE and similar systems in neighboring gulf countries. The UAE is developing such a surveillance center with the leadership provided by the NRC and the WHO is promoting similar centers in the region.

### **Lessons learned**

This study is considered as a retrospective type of study, which has clear limitations, but since there were no other data, it provided an empirical basis to commence. We have learned many lessons from this retrospective data, and have drawn on the number of limitations, which can be dealt with in the future and can contribute for many improvements in the NRC going forward.

Effectively addressing the challenges of conducting research in a very protected society is crucial to its success. The lessons learnt from using the retrospective gathered data were beneficial and

can be used to develop rich resources of further research in the area of alcohol and drug abuse in the clinical setting. With the introduction of the Electronically Medical Record, which was introduced a few years back, more rapid assessment of changes in the patient population and their risks can be assessed prospectively.

There were several challenges encountered in this study. The lack of admission of female participants until very recently only allows conclusions to be drawn on male patients. Since 95% of the patients registered with the NRC are male, it is challenging to recruit female patients. The majority of female patients in the UAE receive treatment for substance use disorder in psychiatric wards in hospitals. Future studies need to be expanded to include different recruitment strategies targeting this group of patients to allow characterization of patients of both genders with substance use disorder in the UAE.

Many lessons were learned from the process of doing this research as the following:

- How to do literatures searches
- How to do data analysis
- How to write a paper or a report?
- How to teach others to do a research study in the future

**Next steps**

There are a number of policy implications resulting from this study. Examining the picture of illicit drug use and physician-prescribed poly-drug use, stricter implication of the laws that exist in the country as well as developing more treatment facilities that would make treatment more accessible, are relevant policy considerations.

Reviewing policy and working toward coordinating policies with neighboring countries in the region where drug-using patterns have similarities would be useful.

Prevention campaigns and public education programs should educate the public about the dangers of substance abuse and should be targeted at young people as well as families. Messages explaining the consequences of substances use as well as religious messages are worth evaluating for their impact in reducing substance abuse and by involving all sectors in civil society.

There are a number of implications for further research from the lessons learnt and findings from the present study. Future research should select and adapt instruments based on theoretical models and more clearly defined concepts and criteria.

Future research in the UAE should consider extending the present study to a female population and to adolescents, as well as repeating it in a different treatment setting, such as the outpatient setting.

Taking the limitations of the present study into consideration, future studies should address specifically age at initiation of substance abuse, causes of substances abuse, and factors related to relapse.



**Strengths**

The main strength of this study is that it is the first to comprehensively explore a national male population of drug and alcohol users using retrospective data.

As the present study is the first from the UAE addressing this important problem of substance abuse, including such a large number of patients receiving treatment at the NRC allows better assessment of the situation. These data were collected in the primary center for treatment of substance abuse in Abu Dhabi and the UAE. The study collected a wide range of relevant data on this population. Data collectors were well trained and supervised by senior researchers to assure the quality of data. The present study is undoubtedly a serious undertaking to fill the gap of an almost complete lack of knowledge about substance use in UAE. Therefore, it may be a valuable resource to policy makers and prospective researchers in this field. In addition, many studies can be taken from the data collected in this study.

**Limitations**

There are a number of limitations of this study that should be taken into consideration to inform future studies. The study was a retrospective study, based primarily on review of clinical case notes and conducted among a treatment seeking population of substance users and those depended to care. Substance users presenting for treatment represent the tip of the iceberg and are unlikely to represent all users in a country. They are likely to represent the most severe, advanced cases.

The data are limited by the fact that this is limited to adult males, but recently the NRC opened its first female unit and it plans to open an adolescent unit. A further limitation is that there is no current data on expatriate substance use in the UAE.

In order to represent all substance users and to generate a reliable estimate of prevalence, general population-based studies theoretically should be carried out. However, such studies are difficult to perform and very likely to grossly underestimate the problem. This is evident when we consider the stigmatizing nature of the problem and the severe punishment for identified substance abusers in the country. In such a situation, self-reports are likely to be largely invalid for fear of stigma and anticipated punishments. Some researchers have attempted surveys of special population groups such as students and prisoners but the extent of underestimation is difficult to determine. In addition, the data is also limited to adult males. However, recently the NRC opened its first female unit and plans to open an adolescent unit. In addition, there no current data on expatriate drug use in the Emirates.

According to available data, there is an increase in the number of admissions for treatment of drug abuse recently along with an increase in poly-substance and prescription drug abuse particularly since 2009. Considering all the limitations listed above, this is the best available data from one of the largest and only comprehensive treatment center in the UAE.

### **Future Directions**

In the future an electronic information system needs to be established to capture directly all the information needed for a study. A follow up with longitudinal study can be done in the future.

There are a number of implications for practice from this study. First, with the high number of prescribed medication abusers, and considering the future health burden, it is suggested that the addiction treatment program in the UAE introduce awareness and education programs for physicians and health workers to their overall programmed regarding prescription medication abuse. Addressing prescribed medications during the normal physician visit and consultation is critical to prevent iatrogenic substance dependence.

The results also showed that a large proportion of patients are now poly-drug users and had moved from one substance to another to get the same effect if one became unavailable. Treatment programs should address the issue of addiction substitution and a pharmacological education element on how substances work on the brain.

The lessons learnt and the limitations of the study should inform and contribute to improving future research in this area.

More emphasis on the prevention and education programs from drug use is required using mass media to promote awareness of prevention programs and highlighting the risks posed by old and new emerging substances. To develop Intervention strategies, targeting those young populations, which will capture a large subset of sufferers.

Finally, this study highlights the importance of examining the pattern of poly-substance use in a population in order to develop targeted prevention programs to arrest the prevailing trends. It has drawn attention to the rise in use of prescription medication in the UAE, in particular among younger patients (<30 years), and continuing use of illicit opioid amongst males above 30 years. Specific prevention and intervention strategies targeting differences between these distinct demographic profiles will help capture a large subset of sufferers.