

## RATIONAL AND IRRATIONAL USE OF ANTIDEPRESSANTS IN THE REGION OF TETOVO

Driton SELMANI<sup>1</sup>, Bekim ISMAILI<sup>1</sup>, Ismail SAIDI<sup>1</sup>, Nexhibe NUHII<sup>2</sup>, Qahil IBRAHIMI<sup>2</sup>, Agnesa EMURLI<sup>2</sup>, Elona EMURLI<sup>2</sup>, Afrim ALIU<sup>3</sup>

<sup>1</sup>Department of General Medicine, Faculty of Medical Sciences

<sup>2</sup>Department of Pharmacy, Faculty of Medical Sciences

<sup>3</sup>Emergency Medicine Department, Clinical Hospital Tetova

\*Corresponding author e-mail: driton.selmani@unite.edu.mk

---

### Abstract

The main purpose of this study is to analyze and evaluate the attitudes and practices of using antidepressants, herbal products for the treatment of depression, as well as raising awareness about the use of antidepressants among respondents in Tetovo and the surrounding area. The target population randomly selected for the study was females and males aged 18 to 57 years.

The study was conducted through the survey process with the Google Questionnaire platform.

The vast majority of respondents used antidepressant with a doctor's recommendation with a figure of 71%, where the majority of antidepressant users were female, while 29% used antidepressant without a doctor's recommendation.

As pharmaceutical preparations most often used benzodiazepines for the treatment of depression which since these results as a recommendation should be taken to raise awareness of the population for the treatment of depression and not only for its simultaneous treatment.

Regarding the period of use of antidepressants without a doctor's recommendation according to the patient's need is very large from the study done and measures should be taken to raise awareness among the population not to use at all without a doctor's recommendation and if used follow the instructions given by the doctor.

The number of users of herbal products is very small and disturbing as most individuals choose to use benzodiazepines to manage their distressing symptoms and from this we can recommend raising awareness by pharmacists to patients when purchasing products and done a clarification on the use of herbal products as an alternative.

From the study, the majority of respondents think that the use of antidepressants as needed has been effective and that they are aware of the side effects of use, which should result in a massive awareness of the population including doctors, pharmacists and patients about the use of antidepressants.

*Keywords:* rational, irrational, antidepressants, side effects.

---

### 1. Introduction

Antidepressants are drugs used to treat major depressive disorders, anxiety disorders, chronic pain and help manage some addictions. Common side effects of antidepressant drugs include dry mouth, weight gain, dizziness, headaches, sexual dysfunction,[2] and emotional disorders. [3]

There is an easy risk of thinking up suicidal behavior when taken by children, adolescents and young adults. A cessation syndrome can occur after stopping any antidepressant resembling recurrent depression. [5]

The earliest and perhaps most widely accepted scientific theory of antidepressant action is the monoamine hypothesis (which can be traced back to the 1950s), which says depression occurs due to an imbalance (most commonly a deficiency) of monoamine neurotransmitters (namely serotonin, norepinephrine and dopamine). [6]

It was initially proposed based on the observation that certain anti-tuberculosis agents of hydrazine produce antidepressant effects, which was later linked to their inhibitory effects on monoamine oxidase, the enzyme that catalyzes the breakdown of the neurotransmitters monoamine. [7]

All currently marketed antidepressants have the monoamine hypothesis as their theoretical basis, with the possible exception of agomelatine acting on a melatonergic-serotonergic double pathway. Despite the success of the monoamine hypothesis, it has a number of limitations: for one, all monoaminergic antidepressant drugs have a delayed onset of action at least a week; and second, there is a significant proportion (> 40%) of depressed patients who do not adequately respond to monoaminergic antidepressants. [9] A number of alternative hypotheses have been proposed, including glutamate, neurogenic, epigenetic, cortisol and inflammatory hyper secretion hypotheses. [10]

Before the 1950s, opioids and amphetamines were commonly used as antidepressants. [11] Their use was later restricted due to their addictive nature and side effects. Extracts from cantaroni are used as a "nerve tonic" to relieve depression. [13]

## **2. Aim**

Given the fact that the use and misuse of antidepressants is little studied, it has awakened interest in accumulating data about their use and misuse as important preparations for better mental health functioning.

Thus, the main purpose of this study is to analyze and evaluate the attitudes and practices of using antidepressants, herbal products for curing depression, as well as awareness about antidepressant use among respondents in Tetovo and the surroundings.

### **Specific aim of the study:**

Evaluation of the use of medications for depression in respondents:

1. Prevalence of antidepressants recommended by a doctor
2. Prevalence of antidepressants without a doctor's recommendation
3. Types of antidepressants most used and period of use
4. The most common reasons for the use of plant products and their prevalence

Assess respondents' attitudes about the effectiveness and awareness of side effects of antidepressant use.

## **3. Material and methods**

This is a transversal, descriptive study conducted through a self-administration structured questionnaire, in a random sample of individuals in Tetovo and the surrounding area.

### **Target population**

The target population randomly selected for the study was both female and male between the ages of 18 and 57.

## **Data collection tools**

The study was conducted through the survey process with Google questionnaire. For the design of the python with self-administration, literature and questionnaires similar to our research have been consulted.

The questionnaire is categorized into four sets of questions to collect data on:

- (1) Demographic characteristics
- 2) Use of antidepressants with or without a doctor's recommendation, type, period and efficacy of use
- 3) Use of herbal products for the treatment of depression
- 4) Attitudes of individuals on how aware of the side effects of antidepressants

## **Demographic data**

The questions on socio-demographic characteristics are answered about gender, age and schooling level.

## **Antidepressant use with or without a doctor's recommendation, type, period and effectiveness**

The questions are formulated to identify the prevalence of antidepressant use, their use with or without a doctor's recommendation, taking them as recommended or needed, period of use and individuals' attitude on the effectiveness of use.

## **Use of herbal products for the treatment of depression**

In this section the questions are formulated to identify the prevalence and reason for the use of plant products.

## **Individuals' attitudes and awareness of the side effects of antidepressants**

The last section contains two questions about individuals' attitudes towards the efficacy of using antidepressants as needed and whether they are or are unaware of their side effects. Individuals have responded to statements with affirmation or denial of the above question.

## **Ethics**

All respondents were locked into the study after being informed about the purpose of the study, privacy, assuring them that the questionnaire would be anonymous and that the data collected by them would not be identifiable. All participants gave verbal consent to participate prior to data collection.

## **Data Analysis**

Data entered into Excel to be calculated by response frequency, percentages gained from responses and presentation of data collected from the study with graphs, have been statistically processed by Microsoft Excel Version 2016.

## 4. Results

### *Characteristics of socio-demographics*

The first part of the questionnaire included the socio-demographic characteristics of individuals who participated in the study. The questionnaire starts with the age of the respondents and the frequency and percentages of responses will be shown below.

#### *Age*

The age of the respondents was 18 to 57 years old.

#### *Gender*

Of those surveyed 81% were female and 19% were male.

#### *The level of education of respondents*

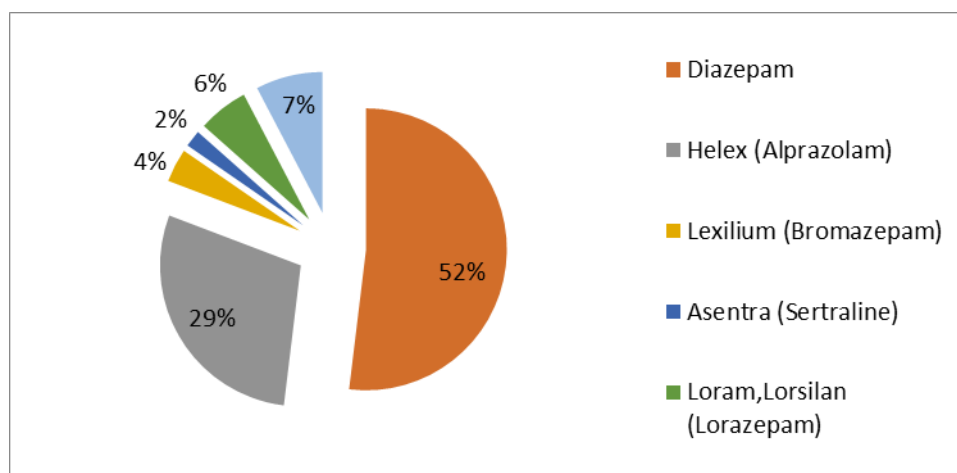
From the accumulated results, we observe that most of the respondents had high professional preparation represented by 83% of the total. With secondary education there were 12% of respondents and only 5% had primary schooling.

#### *Prevalence of antidepressants recommended by a doctor*

Of the collected data, 71% of respondents have used a doctor-prescribed antidepressant, while 29% did not use a doctor-prescribed antidepressant.

#### *Type of antidepressant used with doctor's recommendation*

From the accumulated results for the type of antidepressant used on a doctor's recommendation, 52% of individuals have used Diazepam for the treatment of depression, 29% have used Alprazolam (Helex), 7% Paroxetine (Deprozol, Seroxat), 6% Lorazepam (Loram, Lorsilan), 4% Bromazepam (Lexilium) and 2% Sertraline (Asentra).



**Graph.1.** Type of antidepressant used with doctor's recommendation

### ***Period of antidepressants use recommended by the doctor***

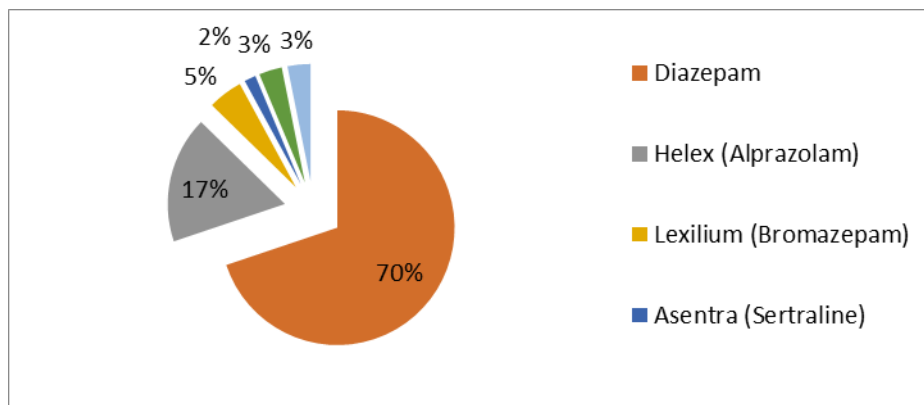
49% of respondents in the study used antidepressants as per personal needs, 48% took antidepressants as per their doctor's recommendation, and 3% of respondents took antidepressants as per their personal needs.

### ***Prevalence of antidepressants use without a doctor's recommendation***

Of the data collected, 33% of respondents have taken antidepressants without a doctor's recommendation, while 67% did not use antidepressants without a doctor's recommendation.

### ***Type of antidepressants used without a doctor's recommendation***

From the accumulated results for the type of antidepressant used without a doctor's recommendation, 70% of individuals have used Diazepam for the treatment of depression, 17% have used Alprazolam (Helex), 5% Bromazepam (Lexilium), 3% Paroxetine (Deprozol, Seroxat), 3% Lorazepam (Loram, Lorsilan) and 2% Sertraline (Asentra).



**Graph.2.**Type of antidepressant used without doctor's recommendation

### ***Period of use of antidepressants without a doctor's recommendation***

92% of respondents in the study used antidepressants according to their personal needs, 8% only used it because they thought it made them feel better and none of the respondents used them according to the instructions from the Internet.

### ***Prevalence of use of herbal products for the cure of depression***

When asked if they used herbal products to treat depression, 61% answered no, while 39% of respondents used herbal products to cure depression.

### ***The reason for using herbal products to treat depression***

The reason for using herbal products for depression has also been explored. From the results achieved, 91% of individuals are aware that plant products are less harmful for use, 7% have used herbal products because they are easier to find and 2% have used plant products because they are cheaper.

### ***Herbal products used to cure depression***

From the results accumulated for the type of herbal product used to treat depression, we can see that 70% of respondents have used Valerian (*Valeriana officinalis*), 14% mint (*Mentha piperita*), 10% have used lavender (*Lavandula angustifolia*), 5% chamomile (*Matricaria chamomila*) and 1% of respondents have used cannabis (*Cannabis sativa*) for the treatment of depression.

### ***The respondents' attitudes regarding awareness of the side effects of antidepressant use***

In the fourth part of the questionnaire, the respondents' attitudes regarding awareness about the side effects of antidepressant use were analysed.

From the results collected for the question:

#### ***"Are you aware of the side effects of antidepressants?"***

83% of respondents were aware and 17% were unaware of the side effects of antidepressants.

Also 60% of respondents think that using antidepressants as needed has not been effective, while 40% think it has been effective.

## **5. Conclusion**

Most of the respondents used antidepressants with a doctor's recommendation with a percentage of 71% and 29% used antidepressants without a doctor's recommendation

As a pharmaceutical preparation they have most commonly used benzodiazepine to treat depression and these results should be taken as a recommendation measures to raise awareness of the population for the treatment of depression and not only for the treatment of it simultaneously, where after some more detailed questions during the completion of the survey we realized that the respondents started using benzodiazepines to manage symptoms.

From the study done, measures should be taken to raise awareness among the population so that they are not used at all without the doctor's recommendation and if they are used to follow the instructions given by the doctor.

The use of herbal products for the treatment of depression is a common phenomenon, but our study showed that very few patients use herbal products for the treatment of depression. The number of users of herbal products is very small and worrying as most individuals choose the use of benzodiazepines to manage their distressing symptoms and from this we can reconsider the awareness of pharmacists in patients when buying products and make a clarification about the use of herbal products as an alternative.

The study, conducted by the majority of respondents, believe that the use of antidepressants as needed was effective and that they are aware of the side effects ,wherein there should be a massive raise of awareness of the population including doctors, pharmacists and patients about antidepressants right way of use.

## References

- [1] Jennings, Leigh (2018). "Chapter 4: Antidepressants". In Grossberg, George T.; Kinsella, Laurence J. (eds.). *Clinical psychopharmacology for neurologists: a practical guide*. Springer. pp. 45–71. doi:10.1007/978-3-319-74604-3\_4. ISBN 978-3-319-74602-9.
- [2] Healy D, Noury LJ, Manginb D (May 2018). "Enduring sexual dysfunction after treatment with antidepressants, 5 $\alpha$ -reductase inhibitors and isotretinoin: 300 cases". *International Journal of Risk & Safety in Medicine*. 29 (3): 125–134. doi:10.3233/JRS-180744. PMC 6004900. PMID 29733030.
- [3] Sansone, Randy A.; Sansone, Lori A. (October 2010). "SSRI-Induced Indifference". *Psychiatry*. 7 (10): 14–18. PMC 2989833. PMID 21103140.
- [4] "Revisions to Product Labeling" (PDF). FDA. Retrieved 10 November 2018.
- [5] Wilson, E; Lader, M (December 2015). "A review of the management of antidepressant discontinuation symptoms". *Therapeutic Advances in Psychopharmacology*. 5 (6): 357–68. doi:10.1177/2045125315612334. PMC 4722507. PMID 26834969.
- [6] Brunton LL, Chabner B, Knollmann BC, eds. (2011). *Goodman and Gilman's The Pharmacological Basis of Therapeutics* (12th ed.). New York: McGraw-Hill Professional. ISBN 978-0-07-162442-8.[needs update]
- [7] Maes M, Yirmiya R, Norberg J, Brene S, Hibbeln J, Perini G, Kubera M, Bob P, Lerer B, Maj M (March 2009). "The inflammatory & neurodegenerative (I&ND) hypothesis of depression: leads for future research and new drug developments in depression". *Metabolic Brain Disease*. 24 (1): 27–53. doi:10.1007/s11011-008-9118-1. PMID 19085093. S2CID 4564675.
- [8] Sanacora G, Treccani G, Popoli M (January 2012). "Towards a glutamate hypothesis of depression: an emerging frontier of neuropsychopharmacology for mood disorders". *Neuropharmacology*. 62 (1): 63–77. doi:10.1016/j.neuropharm.2011.07.036. PMC 3205453. PMID 21827775.
- [9] Menke A, Klengel T, Binder EB (2012). "Epigenetics, depression and antidepressant treatment". *Current Pharmaceutical Design*. 18 (36): 5879–5889. doi:10.2174/138161212803523590. PMID 22681167.
- [10] Vialou V, Feng J, Robison AJ, Nestler EJ (January 2013). "Epigenetic mechanisms of depression and antidepressant action". *Annual Review of Pharmacology and Toxicology*. 53 (1): 59–87. doi:10.1146/annurev-pharmtox-010611-134540. PMC 3711377. PMID 23020296.
- [11] Preskorn SH, Ross R, Stanga CY (2004). "Selective Serotonin Reuptake Inhibitors". In Sheldon H. Preskorn, Hohn P. Feighner, Christina Y. Stanga, Ruth Ross (eds.). *Antidepressants: Past, Present and Future*. Berlin: Springer. pp. 241–62. ISBN 978-3-540-43054-4.
- [12] Kramer, Peter (7 September 2011). "In Defense of Antidepressants". *The New York Times*. Archived from the original on 12 July 2011. Retrieved 13 July 2011.
- [13] Pies R (April 2010). "Antidepressants Work, Sort of-Our System of Care Does Not". *Journal of Clinical Psychopharmacology*. 30 (2): 101–104. doi:10.1097/JCP.0b013e3181d52dea. PMID 20520282.