http://ejournal.seaninstitute.or.id/index.php/healt
Jurnal Eduhealt, Volume 14, No. 04 2023
E-ISSN. 2808-4608

Profile of Psychopharmaceutical Drug Use among Clients at the Baddoka Makassar National Narcotics Board Rehabilitation Centre

Fajriansyah[1], Andi Paluseri[2], Vina Jihanita Eka Putri[3]
[1,2,3]Bagian Farmakologi dan Farmasi Klinik, Fakultas Ilmu Kesehatan Universitas Almarisah Madani, Makassar, Indonesia

ARTICLE INFO

Keywords:
Psychopharmaceutical, Rehabilitation, National Narcotics Board.

ABSTRACT

Baddoka Makassar National Narcotics Board Rehabilitation Center is one of the institutions with rehabilitation missions and functions to provide treatment, care and recovery to drug addicts or victims. Rehab clients typically suffer from psychiatric disorders, anxiety disorders, or depression. The main treatment for this disease is psychosocial therapy and psychiatric medication. This study aims to determine the patterns of psychotropic drug use among clients of the BNN Baddoka Makassar rehabilitation center. This study is a non-experimental descriptive study. A retrospective data collection was conducted from July to December 2022 which received psychopharmacological treatment and then entered the data into Microsoft Excel and then analyzed it as a percentage. The data obtained showed that the most commonly used psychiatric drug was fluoxetine, an SSRI antidepressant monotherapy, at 12.13%. The most common psychotropic combination was risperidone and trihexyphenidyl (9.24%).

Email :
fajriansyah.fajrin@yahoo.com
puanguce2014@gmail.com
vinajihanita.stifa@gmail.com

1. INTRODUCTION

The problem of drug abuse, psychotropic and other addictive substances (NAPZA) otherwise known as drugs and dangerous drugs (DRUGS) is one of the very serious problems because it can threaten the future of the nation throughout the developed world as well as in the developing world [1]. All ministries and agencies should work synergistically to address this issue, ranging from the National Narcotics Board (BNN), the Indonesian National Police (POLRI), the Indonesian National Army (TNI), the Ministry of Law and Human Rights, the Ministry of Communications and Informatics, the Ministry of Health (Kemenkes), and the Ministry of Social Affairs [2].

The National Narcotics Board (BNN) as a forum agency with the task of coordinating 25 relevant government agencies and coupled with operational authority, has the duties and functions to coordinate relevant government agencies in the formulation and implementation of national drug control policies, and coordinates the implementation of national drug control policies [3]. Based on Indonesia Drugs Report 2022 by BNN RI Data and Information Research Center in cooperation with the Ministry of Foreign Affairs and Ministry of Health reported that based on the 2021 National Survey on Drug Abuse and Illicit Circulation conducted in 13 Provinces in Indonesia, the prevalence rate of drug abuse last year increased from 1.80% or equivalent to 3,419,188 million people in 2019 to 1.95% or equivalent to 3,662,646 million people. Furthermore, the number of drug convicts and prisoners in the province of South Sulawesi amounted to 6,490 people [4].

BNN Baddoka Makassar Rehabilitation Hall is one of the institutions that performs rehabilitation tasks and functions in providing treatment, treatment and recovery to drug paraphernalia or victims of drug paraphernalia. Services provided at BNN Baddoka Makassar Rehabilitation Hall include medical rehabilitation and social rehabilitation. In carrying out social and medical rehabilitation programs, the institute conforms to the annex of the decision of the Minister of Health of the Republic of Indonesia No. 996/MENKES/SK/VIII/2002 on the guidelines for the organization

of rehabilitation services for the abuse and dependence of Drugs, Psychotropics and Other Addictive Substances (NAPZA) [5].

Medicine is a necessity that is widely used as a medical necessity in various places that have health facilities such as health centers, clinics and hospitals. As in BNN Baddoka Rehabilitation Hall, there is a pharmacy that provides various medical needs for clients (people undergoing inpatient rehabilitation). At BNN Baddoka Rehabilitation Hall, there are at least 339 types of drugs available that have different functions and ways of working in the body. With the many types of drugs that have different functions, this is done for rehabilitation clients who need treatment during rehabilitation [6]. Clients undergoing rehabilitation will usually experience mental disorders, anxiety disorders, or depression. The main therapy in treating this disease is psychosocial therapy and psychopharmacology. Psychopharmacology is the standard of treatment used for diseases whose pathophysiology is related to neurobiological problems. The administration of this type of drug is adjusted according to the symptoms that appear and based on the imbalance of each neurotransmitter. Psychopharmacology comprises several categories including antipsychotics, antidepressants, mood stabilizers, antipsychotics, antiparkinsonists, and stimulants [7].

Psychodynamic psychotherapy is a therapy that directs the patient to open speech. Patients will be instructed to talk about their thoughts and feelings. The patient is free to express whatever is on his mind. There are many studies examining the effectiveness of psychodynamic psychotherapy applied to depressed patients. Psychodynamic psychotherapy is often given to depressed patients who also have comorbid personality disorders, such as borderline personality disorder. Psychodynamic psychotherapy may be indicated specifically if depression is accompanied by personality disorders or childhood trauma, and findings are restricted to long-term follow-up. Based on this description, researchers are interested in researching what types of psychopharmaceutical drugs are given to clients at BNN Baddoka Rehabilitation Hall Makassar. This study aims to analyze the pattern of use of psychopharmaceutical drugs in clients at BNN Baddoka Rehabilitation Hall Makassar

2. METHOD

This research is a descriptive study by collecting client medical record data retrospectively at the Baddoka Makassar National Narcotics Board. The research subjects were rehabilitation clients at the Rehabilitation Center in the July-December 2022 period who met the inclusion criteria. The inclusion criteria for this study were rehabilitation clients who received psychopharmaceutical drug therapy and were aged 18-50 years. Meanwhile, the exclusion criteria are incomplete medical record data. The data that has been collected is then input into Microsoft Excel, then the data is analyzed based on percentages

3. RESULTS AND DISCUSSION

Characteristics of respondents

This study was conducted in the medical records section of BNN Baddoka Rehabilitation Hall Makassar with a sample of 53 clients who met the inclusion criteria. Based on the medical record data, sociodemographic data of clients are obtained as shown in table 2. The severity of drug dependence is closely related to the severity of malnutrition. In addition, the nutritional problems experienced by clients of drug dependence are caused by a decrease in appetite during the period of drug use and when the addict experiences withdrawal symptoms such as anxiety, anxiety, depression, and other psychic symptoms. A frequent symptom and highly influential on the rehabilitation process of drug users is depression [8].

Table 1. Characteristics of respondents

Sociodemographic	Total (n=53)	Percentage (%)
Gender		
Male	49	92,45
Female	4	7,55
Age in years		
12-25	28	52,83
26-45	25	47,17

Sociodemographic	Total (n=53)	Percentage (%)
Level of education		
No formal education	3	5,66
Elementary school	4	7,55
Junior high school	5	9,43
Senior high school	37	69,81
Bachelor	4	7,54
Occupation		
Unemployment	23	43,39
Self-employed	13	24,52
Private sector	7	13,20
Farmaer	3	5,66
House wife	2	3,77
Police	1	1,88
Government employees	1	1,88
Fisherman	1	1,88
Student	1	1,88
Parking officers	1	1,88

The study involved 49 (92.45%) more male drug clients than 4 (7.55%) female clients. Men often enjoy conflict and competition, but they think conflict provides a positive impulse and men are more sensitive to physiological responses, compared to women who are more negatively alert and more sensitive to psychological responses, triggering negative stress hormones that can lead to depression than women are more negatively alert and more sensitive. Basically, men are more indifferent to a problem or do not want to know, but when they get a problem that is heavy, men tend to shut down so it can trigger severe depression [9].

At the age of 12-25 years, which is in line with the highest level of education at the high school level, mild depression occurs because in adolescence, their thinking is still not complex so that they can be more indifferent to a problem. Adverse influences of the promiscuous environment, in particular the influence and pressure of peer groups. Drug abuse in peer groups is a strong predictor of drug abuse in adolescents [10]. Meanwhile, at the age of 26-45, they are more able to think properly and logically, so they are better able to condition themselves in the face of problems and show that the level of depression varies from normal, mild, moderate or severe depending on the maturity of the mindset and the ability of the individual to control themselves because in old adulthood there are more problems that must be faced either family, economic or other problems. It is because of this economic problem that the government must be able to create decent jobs for people. Because one of the triggers for the spread of drugs is due to the high unemployment rate in the community environment. So that in order to meet the daily needs of the people doing everything possible including selling and buying drugs [11].

Profile of Psychopharmaceuticals Drug Use

Based on the results of the study of client data taken from medical records and rehabilitation pharmacies at BNN Baddoka Hall in Makassar, it is known that 53 clients who received psychopharmaceutical drug therapy were registered with a total of 810 prescriptions in the period Juli-December 2022 which can be seen in table 3.

Table 2. Characteristics of Pshycopharmaka drug use

Types	Name of the drug	n	%	Frequency of single/combination prescriptions
	First-generation antipsychotics Haloperidol	1	0,57	
	Second-generation antipsychotics	6	3,46	

Types	Name of the drug	n	%	Frequency of single/combination prescriptions
Single therapy	Clozapin (Sizoril®)	5	2,89	95 (54,91%)
	Risperidon	17	9,82	
	Quetiapin (Seroquel XR®)			
	Benzodiazepines			
	Alprazolam	9	5,20	
	Diazepam	3	1,73	
	Clonazepam (Riklona®)	6	3,46	
	SSRI antidepressant			
	Fluoxetine (Elizac®)	21	12,13	
	Vortioxetine (Brintellix®)	12	6,93	
	NaSSA antidepressant			
	Mirtazipine Hemihydrate (Mirzap®)	14	8,09	
	Anticonvulsants			
	Na. divalproex (Depakote®)	1	0,57	
Combination therapy	RSP + THP	16	9,24	78 (45,09%)
	RSP + CNZ	15	8,67	
	RSP + FLX	7	4,04	
	RSP + DZP	5	2,89	
	FLX + ALP	3	1,73	
	MZP + ALP	2	1,15	
	QTP + THP	2	1,15	
	HLP + ALP	1	0,57	
	CLO + DZP	1	0,57	
	DZP + THP	1	0,57	
	DZP + Metamizole inj.	1	0,57	
	RSP + THP + Bcom	3	1,73	
	RSP + THP + ALP	3	1,73	
	RSP + THP + CNZ	3	1,73	
	RSP + THP + DZP	3	2,73	
	RSP + THP + FLX	2	1,15	
	HLP + THP + ALP	1	0,57	
	RSP + HLP + THP	1	0,57	
	RSP + CNZ + MZP	1	0,57	
	RSP + THP + MZP	1	0,57	
	QTP + CNZ + THP	1	0,57	
	RSP + CNZ + FLX	1	0,57	
	RSP + THP + ALP + Bcom	1	0,57	
	RSP + DZP + THP + Bcom	1	0,57	
	HLP + DZP + THP + Bcom	1	0,57	
	RSP + HLP + DZP + THP + DPT	1	0,57	
Total		173		

Source: Primary Data

Description: ALP: Alprazolam; Bcom: Bcomplex; CLO: Clozapine; CNZ: Clonazepam; DPT: Depakote; DZP: Diazepam; FLX: Fluoxetine; HLP: Haloperidol; MZP: Mirtazipine; RSP: Risperidone; THP: Triheyphenydil; QTP: Quetiapine

On the use of the drug fluoxetine (Elizac®) in single therapy it has the highest percentage of 12.13%. Fluoxetine preparations have 3 types of tablet dosages namely 10mg, 20mg, and 60mg. The drug is indicated for the acute treatment and maintenance of major depressive disorders. In conditions of mild, moderate or severe renal impairment no dose adjustment is required and in conditions of cirrhosis or chronic liver disease lower doses of up to 50% or less frequent doses are used. Side effects that can occur are insomnia, nausea, headache, weakness, diarrhea, anxiety, nervousness, and tremors. Patients taking the drug should be closely monitored for behavioral changes, clinical worsening, and suicidal tendencies, this should be done during the initial 1-2 months of therapy and dose adjustment. [12]. According to Musdalifah, 2019 Fluoxetine is a type of SSRI antidepressant that provides the best safety and efficacy profile for treating negative symptoms compared to other types of antidepressants. In addition, the administration of fluoxetine also improves the patient's adherence to taking the drug. [13]. The use of fluoxetine in elderly patients and pregnant women is also safer and more effective. In addition, fluoxetine use was also not associated with an increased risk of patient suicide in the overall controlled clinical trial evaluation. Fluoxetine is an antidepressant that works by increasing the activity and circulation of a chemical in the brain called serotonin. As serotonin levels increase, the chemical balance in the brain changes and the symptoms of these three psychological disorders can be resolved. Indications for therapy are major depressive disorder, bulimia nervosa, panic, premenstrual dysporic, bipolar disorder, obesity, cataplexy, alcohol dependence. Fluoxetine 10 mg and 20 mg preparations [14].

In the use of combination therapy, it can be seen that the combination of risperidone and trihexyphenidyl has the highest result, which is 16 (9.24%) and does not differ much from the combined use of risperidone and clonazepam drugs by 15 (8.67%). The interaction that occurs is where Risperidone enhances the effects of trihexyphenidyl by pharmacodynamic synergy. The combination of these drugs can also potentially produce additive anticholinergic effects. This has resulted in the use of these two drugs needing attention [15].

Based on Medscape, 2023 risperidone has 6 dosage types which are 0.25, 0.5mg, 1mg, 2mg, 3mg, 4mg. The drug is indicated for schizophrenia, and bipolar disorder. For schizophrenia the dose given is 2mg/day, and in bipolar disorder the commonly used dose is 2-3mg/day. In conditions of post-traumatic stress disorder the dose is given as 0.5-8mg/day. Side effects of the drug are somnolen, insomnia, agitation, anxiety, headache, rhinitis, fatigue, parkinsonism, increased appetite, as well as vomiting may occur. Contraindication of the drug is hypersensitivity. Use with caution in patients who have a history of seizures, parkinsonism, dementia, cardiovascular diseases, hypovolemia, dehydration. Treatment can lead to an increase in serum prolactin levels, which can lead to a reversible decrease in fertility in women with reproductive potential. In breast milk in the relative infant dose is about 2.3-4.7% of the dose adjusted for the mother's weight. In infants exposed to risperidone it is reported that sedation, failure to grow, restlessness, and extrapyrimidal symptoms (tremors and abnormal muscle movements) may occur [12].

The mechanism of action in the drug risperidone is that it has a high affinity for serotonin receptors type 2 (5-HT2); binds to dopamine D2 receptors with an affinity 20 times lower than 5-HT2 receptors; antagonizes alpha1-adrenergic, alpha2-adrenergic, and histaminergic receptors; has moderate affinity for serotonin receptors type 1 (5-HT1C, 5-HT1D, 5-HT1D, 5-HT1D HT1A); has weak affinity for dopamine D1 receptors; lacks affinity for muscarinic, beta1-adrenergic, and beta2-adrenergic receptors. Risperidone is widely used in the treatment of combination therapy. Risperidone is a class II antipsychosis, which is an atypical group. Group II antipsychoses are a class of drugs that have the effect of reducing both negative and positive symptoms. Compared to group I antipsychosis, risperidone has better effectiveness in controlling negative and positive symptoms [16]. This study still has limitations, among other things, there are few criteria data and there are some incomplete data that cannot be traced further.

4. CONCLUSION

Based on the results of research on the patterns of psychopharmaceutical drug use in clients at Baddoka National Narcotics Board rehabilitation hall Makassar, it can be concluded the most widely

used pattern of psychopharmaceutical use was the single therapy of the SSRI antidepressant group, Fluoxetine at 12.13%. The most psychopharmaceutical drug combinations were risperidone and trihexyphenidyl at 9.24%.

REFERENCES

[1] A. S. Diasari, A. A. Prayitno Setiadi, and L. Nurmayanti, "Hubungan antara Karakteristik Pasien dan Terapi terhadap Nilai Retensi di RSJ Menur Surabaya," *J. Ilmu Kefarmasian Indones.*, vol. 17, no. 2, p. 132, 2019, doi: 10.35814/jifi.v17i2.535.

[2] M. Miswanto and T. Tarya, "Implementasi Program Rehabilitasi Narkoba Berbasis Masyarakat di Pusat Rehabilitasi Narkoba ar-Rahman Tegal Binangun Palembang," *Intizar*, vol. 23, no. 1, p. 113, 2017, doi: 10.19109/intizar.v23i1.1272.

[3] Irwan Jasa Tarigan, *Peran Badan Narkotika Nasional dengan Organisasi Sosial Kemasyarakatan dalam Penanganan Pelaku Penyalahgunaan Narkotika*. Deepublish, 2017.

[4] Pusat Penilitian Data dan Informasi BNN, "Indonesia Drugs Report," *Paper Knowledge . Toward a Media History of Documents*, vol. 5, no. 2. pp. 40–51, 2021.

[5] N. R. Said, M. T. Maloko, and N. T. Sanusi, "Metode Therapeutic Community Bagi Residen Di Balai Rehabilitasi Bnn Baddoka Makassar Perspektif Hukum Islam," *J. Al-Qadau Peradil. dan Huk. Kel. Islam*, vol. 6, no. 2, pp. 269–286, 2019, doi: 10.24252/al-qadau.v6i2.10804.

[6] T. Maslihatin, "Sistem Asosiasi Penyusunan Obat Pada Apotek Balai Rehabilitasi Badan Narkotika Nasional Baddoka Menggunakan Algoritma Apriori," *Celeb. Comput. Sci. J.*, vol. 2 No 2, no. 2020-10–30, pp. 27–38, 2020, [Online]. Available: http://journal.lldikti9.id/ccsj/article/view/518

[7] S. Novitayani, "Psychopharmacology Therapy on Outpatients in the Aceh Psychiatric Hospital," *Idea Nurs. Journl*, no. 2016, 2018.

[8] Astiani, "Gejala Perilaku Penyalahguna Methapetamin Berdasarkan Status Gizi Di Balai Rehabilitasi Badan Narkotika Nasional Baddoka Makassar," *J. Muslim Community Heal.*, vol. 1, no. 3, pp. 87–99, 2020, [Online]. Available: http://pasca-umi.ac.id/index.php/jmch/article/download/257/273/1031 Diakses pada tanggal 8 Juni 2022

[9] A. Rahmawati, "Hubungan Tingkat Depresi dengan Jenis Tahap Rehabilitasi Pada Residen Narkoba," *J. Kesehat.*, vol. 6, no. 2, 2019.

[10] Mustamin, "Studi Tentang Penyebab Penggunaan Narkoba Dikalangan Remaja di Kelurahan Penana'e Kecamatan Raba Kota Bima," *J. Ilm. Mandala Educ.*, vol. 1, no. 2, pp. 237–249, 2015.

[11] M. Al Ansari, A. Amirullah, and R. Ruslan, "Kerjasama Orang Tua, Sekolah, dan Pemerintah dalam Upaya Pencegahan Penyalahgunaan Narkoba pada Remaja," *J. Ilm. Pendidik. Pancasila dan Kewarganegaraan*, vol. 5, no. 2, p. 416, 2020, doi: 10.17977/um019v5i2p416-426.

[12] "Medscape." [Online]. Available: https://reference.medscape.com/

[13] W. Musdalifah, R. Susanti, and Robiyanto, "Evaluasi Penggunaan Obat Triheksifenidil Sebagai Terapi Adjuvan Pada Pasien Skizofrenia di Instalasi Rawat Inap Rumah Sakit Jiwa Daerah Sungai Bangkong Pontianak," *J. Mhs. Farm. Fak. …*, vol. 4, no. 1, pp. 1–12, 2019, [Online]. Available: https://jurnal.untan.ac.id/index.php/jmfarmasi/article/view/43955%0Ahttps://jurnal.untan.ac.id/index.php/jmfarmasi/article/viewFile/43955/75676587791

[14] A. P. Panjaitan and T. Septa, "Diagnosis Dini Depresi Pasca Studi Kasus di RS Jiwa Provinsi Lampung," *J. Ilm. Mhs. Kedokt. Indones.*, vol. 6, no. 2, pp. 4–12, 2018.

[15] R. Yulyanti and A. Yulinar Ramdiani, "Analisis Potensi Interaksi Obat Antidepresan pada Pasien Skizofrenia di Rumah Sakit Swasta Bandung Januari - Juni 2021," *J. Sos. Sains*, vol. 1, no. 10, pp. 1170–1180, 2021, doi: 10.59188/jurnalsosains.v1i10.225.

[16] F. N. E. Eddy, T. Septa, and D. I. Angraini, "Diagnosis dan Tatalaksana Skizofrenia Hebefrenik Putus Obat dengan Logorrhea," *J. Medula Unila*, vol. 7, no. 3, pp. 17–21, 2017.