



Risk Factors for Mental Disorder in The Working Area of The Limboto Health Center

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Article Information

ABSTRACT

Article History

Accepted 30-11-2023

Revision 12-12-2023

Published 18-01-2024

Keywords:

Mental Disorders
Genetics
Chronic Diseases
Drug Abuse

Genes contribute around 37 percent of the risk of developing mental disorders, compared to other factors because individuals who have family members who experience mental disorders have a higher tendency. The cause of the disorder can also be influenced by drug abuse and chronic disease. Drug abuse can have long-term consequences to serious mental disorders such as psychosis. The aim of this research is to identify genetic factors, drug abuse and chronic diseases with the occurrence of mental disorders in the Limboto Community Health Center Work Area. Quantitative research design with a cross sectional study approach, a population of 123 mental disorder patients, a sample size of 55 people using accidental sampling technique in this study. The research results showed that 43 respondents (78.2%) had a genetic history, 6 respondents (10.9%) had drug abuse, 17 respondents (30.9%) had a history of disease and 29 respondents (52%) had neuroses mental disorders. .7%). The results of the simple linear regression test showed that there was an influence of genetic factors ($p=0.005$), drug abuse ($p=0.009$) and history of illness ($p=0.042$) on the occurrence of mental disorders in the Limboto Health Center Working Area. It was concluded that genetic factors, drug abuse and a history of illness influence the occurrence of mental disorders

Introduction

Mental health is a condition where a person can develop physically, mentally, spiritually and socially to develop their own abilities, overcome stress, become productive and be able to contribute to their community (Isnawati & Yunita 2019). However, currently mental health problems are still an issue that needs special attention because every year there is an increase in the prevalence of mental disorders (Sinthania et al. 2022).

According to data from the World Health Organization (WHO) in 2022, 1 in every 8 people or 970 million people worldwide live with mental disorders (WHO 2022). In Indonesia, the prevalence of households with mental disorders is 6.7 per mil with the highest cases being in the province of Bali, namely 11.1 per mil and the lowest being in the Riau Islands

province at 2.8 per mil (Ministry of Health of the Republic of Indonesia 2018).

Data from the Gorontalo Provincial Health Service in 2023 showed that the number of people suffering from mental disorders in Gorontalo province was 1,881 people, divided into each region, where Gorontalo City had 244 people, Gorontalo Regency had 739 people, Bone Bolango Regency had 300 people, and North Gorontalo Regency had 190 people. people, Boalemo Regency as many as 210 people and Pohuwato Regency as many as 198 people.

The large number of cases of mental disorders can be caused by various factors, including predisposing factors and precipitating factors. Predisposing factors are factors that predispose a person to be

susceptible to mental disorders and precipitating factors are factors that occur immediately before a psychiatric disorder arises and the possibilities that trigger it (Wicaksono 2016).

The factors that most influence the occurrence of mental disorders are predisposing factors, in this case genetics. Genes contribute around 37 percent of the risk of mental disorders (Murhayati et al. 2021).

Research conducted by Kirana et al (2022) and research by Prihananto et al (2018) shows that genetic factors have a 10,818 times greater risk of being the main cause of mental disorders.

Mental disorders, especially sensory perception disorders and other psychotic disorders, are closely related to genetic factors, including twins or adopted children, individuals who have family members who experience mental disorders who have a higher tendency, compared to people who do not have hereditary factors (Widiyawati 2020).

The cause of the disorder can also be influenced by drug abuse and chronic disease. Drug abuse can have long-term consequences, ranging from addiction, decreased productivity, interpersonal problems, mood disorders such as depression, anxiety disorders to serious mental disorders such as psychosis (Ardian 2022).

The results of the Health Research study on the Impact of Narcotics Abuse in 2019 conducted in 6 provinces in Indonesia showed that drug users stated that there was a long-term impact of drug abuse causing mental disorders, namely 13.1%. In more detail, 86.4% of respondents experienced fear, 48.2% often experienced anxiety and panic, 80% of respondents felt paranoid and isolated, 58% experienced depression and despair, 56.3% experienced sensory hallucinations and 22.3% feel like committing suicide (National Narcotics Agency of the Republic of Indonesia 2019).

Based on research by Manullang & Hutasoit (2019) in the form of a case study of a 19 year old man, it was found that the

patient was diagnosed with a long-onset psychotic disorder due to a history of using psychoactive substances with symptoms that appeared including the patient experiencing auditory and visual hallucinations, delusions of grandeur and delusions of pursuit, emotional disturbances in the form of hypothyroid mood and limited affect.

Risk factors for mental disorders can be caused by chronic diseases. Certain diseases, for example heart disease, cancer and so on, may cause feelings of depression and sadness (Saputra et al. 2023). Feelings of gloom and sadness occur because chronic disease sufferers feel hopeless due to the chronic disease they have experienced for years or even throughout their lives, resulting in depression which is characterized by deep sadness which causes the chronic disease sufferer to lose their enthusiasm for life. If this depression cannot be overcome, it can cause other mental disorders (Imelisa et al. 2021).

This is in line with Purbaningsih's (2018) research, which found that the majority of patients at Gunung Jati Cirebon Regional Hospital who experienced moderate psychosocial problems were patients with diabetes mellitus and the majority of patients with severe psychosocial problems were patients with chronic kidney failure, so it was found that there was a relationship

between chronic disease with psychosocial problem of patients.

Based on the three risk factors that cause mental disorders to prevent mental disorders are needed, where the role of mental health services is very important in community-based primary, secondary and tertiary prevention efforts. Primary prevention efforts carried out in the community include providing health education, stimulating development, mental health programs and stress management. Secondary prevention efforts in the community include finding mental health problems as early as possible and screening for mental health problems. Tertiary prevention efforts include social support

programs from the community, rehabilitation programs to empower patients and families, outreach programs and stigma prevention programs (Zaini 2019).

Initial data collection carried out by researchers at the Limboto Community Health Center found that the number of people suffering from mental disorders at the community health center was 123 patients, consisting of 71 patients with schizophrenia, 25 patients with anxiety and 27 patients with psychotic disorders. Many of these patients do not routinely receive treatment at the health center.

The results of interviews conducted by researchers with people in charge of mental health at the Limboto Community Health Center stated that the causes of mental disorders in the community health center were mostly due to genetic history, then caused by drug abuse and also chronic diseases including epilepsy and vascular dementia. Researchers also conducted interviews with 4 families of mental disorder patients at the Limboto Community Health Center, it was found that 2 of the 4 mental disorder patients had a hereditary history of mental disorders. 1 in 4 patients with mental disorders have a history of drug abuse. The family stated that the patient often experienced disturbances in the form of voices inviting him to play and inviting him to use drugs again. This was felt by the patient since taking drugs. 1 patient experienced a mental disorder because the family stated that the patient was suffering from an illness (the family forgot to diagnose the chronic illness the patient was suffering from) which over time, the illness made the patient despair and finally his condition was like now.

Based on the description above, the aim of this research is to determine the risk factors for mental disorders in the Limboto Health Center Work Area.

Method

This type of quantitative research has an analytical research design with a cross sectional approach. The population is all

mental disorder patients at the Limboto Community Health Center in 2023, totaling 123 people. The sampling technique was accidental sampling of 55 people. The research instrument used was a questionnaire. Simple linear regression data analysis.

Results and Discussion

Univariate Analysis

Table1. Genetic History of Mental Disorder Patients in the Limboto Community Health Center Working Area

No	Genetic History	Amount	Percentage
1	No genetic history	12	21,8
2	There is a genetic history	43	78,2
Total		55	100

Source: Primary Data 2023

Table 1 shows that the majority of respondents had a genetic history of mental disorders, namely 43 respondents (78.2%).

Table 2. Drug Abuse in Mentally Disordered Patients in the Limboto Community Health Center Working Area

No	Drug abuse	Amount	Percentage
1	No drug abuse	49	89,1
2	There is drug abuse	6	10,9
Total		55	100

Source: Primary Data 2023

Table 2 shows that the majority of respondents did not abuse drugs, namely 49 respondents (89.1%).

Table 3. History of illness in mental disorder patients in the Limboto Community Health Center working area

No	Disease History	Amount	Perscentage
1	No disease history	38	69,1
2	There is disease story	17	30,9
Total		55	100

Source: Primary Data 2023

Table 3 shows that the majority of respondents did not have a history of disease, namely 38 respondents (69.1%).

Table 4. Mental Disorders in Mentally Disordered Patients in the Limboto Community Health Center Working Area

No	Mental disorders	Amount	Percentage
1	<i>Neuroses</i>	29	52,7
2	<i>Psychose</i>	26	47,3
Total		55	100

Source: Primary Data 2023

Table 4 shows that the majority of respondents experiencing mental disorders were neuroses, namely 29 respondents (52.7%) and the least were psychosis, namely 26 respondents (47.3%).

Bivariate Analysis

Table 5. Genetic Factors with the Occurrence of Mental Disorders in the Limboto Community Health Center Work Area

Variable	Regression Coefficients	Sig
Constant	5,085	0,000
Genetic	2,589	0,005

Source: Primary Data 2023

Table 5 shows that the regression equation is mental disorders $(Y) = 5,085 + 2,589 X_1$ obtained a significant value 0,005 which means it is smaller than the value $\alpha 0,05$ So it can be concluded that there is an influence of genetic factors on the occurrence of mental disorders in the Limboto Community Health Center Work Area.

Table 6. Drug Abuse Factors and the Occurrence of Mental Disorders in the Limboto Community Health Center Work Area

Variable	Regression Coefficients	Sig
Constant	5,085	0,000
Drug abuse	2,855	0,009

Source: Primary Data 2023

Table 6 shows that the regression equation is mental disorders

$(Y) = 5,085 + 2,855 X_2$ obtained a significant value 0,009 which means it is smaller than the value $\alpha 0,05$ So it can be concluded that there is an influence of drug abuse on the occurrence of mental disorders in the Limboto Health Center Work Area.

Table 7. Factors in the History of Chronic Disease and the Occurrence of Mental Disorders in the Limboto Community Health Center Work Area

Variable	Regression Coefficients	Sig
Constant	5,085	0,000
History of illness	1,696	0,042

Source: Primary Data 2023

Table 7 shows that the regression equation is mental disorders $(Y) = 5,085 + 1,696 X_3$ obtained a significant value 0,042 which means it is smaller than the value $\alpha 0,05$ So it can be concluded that there is an influence of chronic disease factors on the occurrence of mental disorders in the Limboto Community Health Center Work Area.

1. Genetic Factors in the Occurrence of Mental Disorders in the Limboto Community Health Center Work Area

The research results showed that there is a genetic influence on the occurrence of mental disorders with a known significant value of 0.005 ($\alpha < 0.05$). From these data it can be seen that genetics is one of the factors that causes mental disorders in patients in the Limboto Health Center Working Area. There is a hereditary factor in the occurrence of mental disorders

because people who have family members with mental disorders tend to experience mental disorders. Experts believe that many mental disorders are related to abnormalities in many genes, not just one (Nies & McEwen 2018). Someone who is related to the father, mother or sibling of a patient with mental disorders has a 10% tendency, while the incidence of nephews or grandchildren is 2-4%, dizygotic twins are 14-17% (Widiyawati 2020). According to the theory, some mental disorders have a strong genetic component. If someone has a family history of mental disorders, their risk of experiencing similar conditions will be higher (Anita 2023). The results of a genome-wide analysis of single-nucleotide polymorphisms (SNPs) in mental illness found variations in the activity of calcium channel genes that appear to have pleiotropic effects on the psychopathology of several mental disorders that can begin to appear in both childhood and adulthood (Nurlela et al. 2023).

The same research results were obtained in Kirana et al (2022)'s research on risk factors that influence mental disorders, namely that there was a significant influence between genetic factors and mental disorders ($p = 0.36$), where the case group had a 10 times greater risk ($OR = 10.818$, $95\%CI = 1.165-100.439$). Research by Ahmad & Sitorus (2021) states that genetic factors are the main cause of mental disorders in the Sei Kepayang Barat Health Center Working Area, Asahan Regency. and research conducted by Syahputra et al (2021) which shows that genetic history is 17.41 times more likely to suffer from mental disorders. Research by Ahmad & Sitorus (2021) states that genetic factors are the main cause of mental disorders in the Sei Kepayang Barat Health Center Working Area, Asahan Regency. and research conducted by Syahputra et al (2021) which shows that genetic history is 17.41 times more likely to suffer from mental disorders.

According to researchers Ahmad & Sitorus (2021), mental disorders that occur in a person can be related to a history of

other family members who have suffered from mental disorders so that their offspring tend to experience this because when someone is born, they have genetic psychosis which is a combination of their parents and grandparents through genes and chromosomes

2. Factors of Drug Abuse and the Occurrence of Mental Disorders in the Limboto Community Health Center Work Area

The research results showed that there was an influence of drug abuse on the occurrence of mental disorders with a known significant value of 0.009 ($\alpha < 0.05$). From these data it can be seen that drug abuse is a risk factor that causes mental disorders in patients in the Limboto Health Center Working Area. Respondents who experienced mental disorders were because they consumed comix drugs, which resulted in mental disorders and showed symptoms, namely hallucinations, screaming, getting angry and having a history of violent behavior.

Drug abuse and mental illness often occur together, in some cases, mental disorders such as anxiety, depression and schizophrenia can precede addiction, in other cases drug abuse can trigger or worsen mental disorders, especially in people with certain vulnerabilities. Certain drugs (OOT) which are often misused are regulated in Food and Drug Supervisory Agency Regulation Number 10 of 2019, namely drugs that work on the central nervous system other than narcotics and psychotropics which when used above therapeutic doses can cause dependence and typical changes in activity. mental and behavioral. This OOT includes dextromethorphan is an ingredient in comix which if used excessively can cause a sedation effect, but excessive use can cause central nervous depression like opioids (Harwijayanti et al. 2023).

Dextromethorphan is included in class III narcotics which has mild addictive power which is useful and efficacious for treatment but has the potential to cause dependence (Silalahi 2020). Usually Komix

type cough suppressants are consumed by teenagers to get a hangover effect, this type of medicine is usually consumed in more than five sachets or more than 75 mg each time they drink (Yuliana 2021).

Misuse of drugs that should be used to relieve coughs, but because they are consumed excessively and over a long period of time causes permanent mental disorders in teenagers (Ramdani & Patria 2018). There is abuse of this drug as maladaptive coping that a person uses to deal with stressors through drugs that have addictive properties or dependency effects such as komix which causes perception disorders, thought process disorders, motor disorders and so on (Gani et al. 2023).

The same research findings were found in Missesa's (2021) research, it was found that factors causing mental disorders, one of which was drug or drug abuse, were 6 respondents (6.2%), respondents who had a history of drug abuse experienced symptoms including hallucinations and the risk of violent behavior.

According to researchers, the use of Komix, which is supposed to be a cough medicine, is misused by most people, where Komix contains dextromethorphan in it, which if consumed in excess or more than 75 mg at a time can cause a sedation effect, which if consumed for a long period of time can cause the person to suffer. mental disorders with signs and symptoms of hallucinations, screaming, anger and risk of violent behavior.

3. Disease History Factors and the Occurrence of Mental Disorders in the Limboto Community Health Center Work Area

The research results showed that there was an influence of history of illness on the occurrence of mental disorders with a known significant value of 0.042 ($\alpha < 0.05$). From these data it can be seen that a history of illness is a risk factor that causes mental disorders in patients in the Limboto Community Health Center Working Area. Respondents who experienced mental disorders had a history of epilepsy and

dementia for 1-5 years which ultimately resulted in mental disorders.

Epilepsy and dementia, can cause mental disorders (Saputra et al. 2023). Some diseases can have an impact on changing a person's lifestyle (Jek et al. 2022). Epilepsy, which is the cause of mental disorders in this study, is included in other organic mental disorders which not only cause physical problems such as loss of consciousness, uncontrolled movements, unusual sensory phenomena, increased autonomic activity, but can also cause psychological or mental problems in sufferers. (Anwari et al. 2023). Dementia is a mental disorder which is also included in the group of organic mental disorders, which are mental disorders caused by physical illness or medical conditions that primarily or secondarily affect the brain physiologically, resulting in brain dysfunction (Mundakir 2021). Dementia can cause sufferers to experience cognitive impairment, which is included in the aspect of mental disorders, individuals with neuro-cognitive disorders show cognitive deficits that can interfere with independence (Martina et al., 2021).

In line with the research results of Sarwin et al (2022), many respondents who had a history of illness experienced mental disorders, namely 7 respondents (14%), Meanwhile, many respondents who did not have a history of chronic illness did not experience mental disorders. Strengthened by the results of research by Purbaningsih (2018), namely that the majority of patients who have cancer experience severe psychosocial problems of 100%, the majority of congestive heart patients experience moderate psychosocial problems of 100%, the majority of diabetes mellitus patients experience moderate psychosocial problems of 100%. 80%, the majority of chronic kidney failure patients experience severe psychosocial problems by 100%, the majority of hypertensive patients experience severe psychosocial problems by 9%, the majority of heart disease patients experience mild and severe psychosocial problems each by 50%, the majority of

stroke patients 54.5% experienced moderate psychosocial problems and the majority of TB patients experienced moderate psychosocial problems at 50%. From these results, most of the patients with chronic illnesses have mental and social problems classified as severe and severe.

Researchers assume that mental disorders caused by chronic illnesses due to physical illnesses, namely epilepsy and dementia, do not only cause physical symptoms, but can cause mental or psychological problems in epilepsy and dementia sufferers which are caused by dysfunction in the brain which in the end can disrupt the sufferer's lifestyle so that Over time, this disease can cause mental disorders.

Conclusion

It was concluded that there was an influence of genetic factors on the occurrence of mental disorders in the Limboto Community Health Center Working Area with a significant value of 0.005. There is an influence of drug abuse factors on the occurrence of mental disorders in the Limboto Community Health Center Working Area with a significant value of 0.009. There is an influence of chronic disease factors on the occurrence of mental disorders in the Limboto Community Health Center Working Area with a significant value of 0.042.

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