

THE PREVALENCE OF SCHIZOPHRENIA IN SOUTH JAKARTA ADMINISTRATIVE CITY

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ABSTRACT

Background: The population of DKI Jakarta is 10,377,186 people, and it is estimated that in DKI Jakarta there are 11,415 cases of schizophrenia. Newly discovered, recorded and handled during 2017 were 4,690 cases. The prevalence of schizophrenia in DKI Jakarta in 2017 is 1.1 / 1000. This study aims to visualize descriptively the prevalence of schizophrenia in South Jakarta Administrative city.

Methods: The method of study was cross-sectional. The population of all schizophrenia cases obtained from the recording of medical records in 10 sub-district health centers during 2017 was 1,641 patients. Characteristics seen were gender, age, place of residence, patients treated at the health center and those referred to and regular treatment of schizophrenic patients.

Results: The highest prevalence rate in Kebayoran Baru was 11.4/10,000, the largest proportion of 1,641 schizophrenia cases in South Jakarta Administrative City as much as 14% came from Tebet, the highest proportion of male sex was 73% in Tebet, the highest female in Mampang Prapatan by 45%, the proportion of schizophrenia cases was highest in the age 26-45 was 56%, the proportion of schizophrenia in Tebet treated in Puskesmas was 84%, referred to the Hospital as much as 16%, who were not regularly treated at the Puskesmas in 2017 was 56 %.

Conclusion: The largest proportion of schizophrenia is at the age 26-45 in Cilandak Subdistrict, Cilandak Community Health Center handles schizophrenia more because early detection of mental disorders is better than other regions, Jagakarsa Health Center is further strengthened to handle schizophrenia cases.

Keywords: Urbanization, schizophrenia, prevalence.

PREVALENSI SKIZOFRENIA DI KOTA ADMINISTRASI JAKARTA SELATAN

ABSTRAK

Latar Belakang: Jumlah penduduk DKI Jakarta sebesar 10.377.186 jiwa dan diperkirakan di DKI Jakarta terdapat 11.415 kasus skizofrenia. Yang baru ditemukan, tercatat dan ditangani selama tahun 2017 sebanyak 4.690 kasus. Angka prevalensi skizofrenia di DKI Jakarta tahun 2017 adalah 1.1/1000. Oleh karena itu sebagai kota urbanisasi kita perlu melihat gambaran secara deskriptif prevalensi skizofrenia di Kota Administrasi Jakarta Selatan berdasarkan orang, tempat dan waktu.

Metode: Desain studi yang digunakan dalam penelitian ini adalah *cross sectional*. Lokasi penelitian Kota Administrasi Jakarta Selatan. Populasi semua kasus skizofrenia yang didapatkan dari pencatatan rekam medis di 10 Puskesmas Kecamatan selama tahun 2017 sebanyak 1.641 pasien. Karakteristik yang dilihat adalah jenis kelamin, umur, tempat tinggal, pasien yang diobati di Puskesmas dan yang dirujuk serta keteraturan berobat pasien skizofrenia.

Hasil Penelitian: Prevalensi rate tertinggi di Kebayoran Baru yaitu 11.4/10.000, proporsi terbesar dari 1.641 jumlah kasus skizofrenia di Kota Administrasi Jakarta Selatan sebanyak 14% berasal dari Tebet, proporsi jenis kelamin laki-laki tertinggi yaitu 73% di Tebet, tertinggi perempuan di Mampang Prapatan sebesar 45%, proporsi kasus skizofrenia tertinggi pada kelompok umur 26-45 tahun yaitu sebanyak 56%, proporsi skizofrenia di Tebet yang diobati di Puskesmas sebanyak 84%, dirujuk ke RS sebanyak 16%, yang tidak teratur berobat ke Puskesmas selama tahun 2017 sebanyak 56%.

Kesimpulan: Di Jakarta Selatan proporsi skizofrenia terbesar ada pada kelompok umur 26-45 tahun berada di Kecamatan Cilandak, Puskesmas Cilandak lebih banyak menangani skizofrenia karena program pendeteksiaian dini gangguan jiwa lebih bagus daripada wilayah lain, Puskesmas Jagakarsa lebih diperkuat lagi untuk menangani kasus skizofrenia.

Kata Kunci: Urbanisasi, skizofrenia, prevalensi

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INTRODUCTION

Mental health is an essential aspect of realizing overall health. Mental health is also essential to be considered as physical health. Mental health is a fundamental component of the definition of health. Good mental health allows people to realize their potential, overcome the stresses of ordinary life, work productively, and contribute to their community. The health system in the world is considered not enough to respond to the burden of mental disorders.¹

In the context of mental health, two terms are known for individuals who experience mental disorders. First, People with Psychological Problems (ODMK) are people who have physical, mental, social problems, growth and development, and or quality of life, so they are at risk of experiencing mental disorders. Second, People with Mental Disorders (ODGJ) are people who experience disturbances in thoughts, behaviors, and feelings that are manifested in the form of a set of symptoms and or behavioral changes that are meaningful, and can cause suffering and obstacles in carrying out people's functions as humans.²

The category of mental disorders assessed in 2013 Basic Health Research (Riskedas) data is known to consist of emotional, mental disorders (depression and anxiety), and severe mental disorders or psychosis.³ Other forms of mental disorders are postpartum depression and suicide or suicide.⁴

The high cases of psychiatric disorders throughout the world are of particular concern to stakeholders related to mental health policy. In 2014, WHO established Living with Schizophrenia as the theme of world mental health day which is commemorated every October 12th. This theme was chosen because Schizophrenia is the most prevalent psychotic disorder and has a high global prevalence,

according to the 2014 World Federation of Mental Health, which is 0.7-1% of the total world population.⁵

Schizophrenia is a mental disorder that is quite widespread in Indonesia, which is about 99% of patients in a Mental Hospital in Indonesia are schizophrenic.⁶ Schizophrenia is the presence of a positive symptom consisting of two or more symptoms of delusion, hallucinations, speech disorders (disorganization speech) such as incoherence, and catatonic behaviour.⁷ Schizophrenia often occurs in adolescence or early adulthood which is mostly experienced by men around the age of 15-35 compared to women around 25-35 years.⁸

The existence of people with schizophrenia in society is often considered dangerous. Often people with schizophrenia are hidden and even ostracized, not taken to see a doctor because of shame. Even in some areas in Indonesia, there are some who have schizophrenia who have been put in stocks. According to the 2013 Basic Health Research, said that schizophrenia is a public health problem that is a concern because the impact of schizophrenia is not only felt by sufferers and families but also the community and government.⁹ Schizophrenia or severe mental disorders (psychosis) is a severe mental disorder. The National Institute of Mental Health (NIMH) estimates that 40% of people with schizophrenia in the United States do not undergo special treatment. Schizophrenic sufferers have differences that vary considerably in terms of the number and manner of treatment in each country. Countries in Asia constitute the majority of countries with a high number of schizophrenia. The Southeast Asian and East Asian regions dominate the number of people with schizophrenia.¹⁰ The recurrence rate is very high if no appropriate treatment and treatment is taken.¹¹

As stated by WHO, mental health is determined by many factors and social interactions, psychological and biological factors, as well as economic and environmental, related to WHO behavior.¹²

In Indonesia, with a variety of biological, psychological and social factors with the diversity of the population, the number of cases of mental disorders continues to increase which has an impact on increasing the country's burden and decreasing human productivity for the long term.¹³

According to WHO data in 2016, there were around 35 million people affected by depression, 60 million people were bipolar, 21 million were affected by schizophrenia, and 47.5 million were affected by dementia.¹³

China is the 42nd country with the highest number of schizophrenic sufferers from 192 countries that have been studied. Statistical prevalence of people with schizophrenia worldwide reaches 1.1% or around 51 million. India is not much different from China.¹⁴ The population of Indian schizophrenics' ranks 47th out of 192 countries recorded. Japan is the country with the lowest number of people with schizophrenia in Asia.¹⁵

Based on the 2013 Riskesdas data, the prevalence of severe mental disorders nationwide was 1.7 ‰ (per mile), or 1,728 people. This condition declined compared to the data reported in 2007 at 4.6 ‰. The prevalence of psychosis or schizophrenia is highest in Yogyakarta (2.7 ‰), Aceh (2.7 ‰), and South Sulawesi (2.6 ‰), while the lowest is in West Kalimantan (0.7 ‰).³

The population of DKI Jakarta is 10,377,186 people, and it is estimated that in DKI Jakarta there are 11,415 cases of schizophrenia (Riskesdas in 2013). Moreover, the new ones found, recorded and handled during 2017 were 4,690 cases and 591,500 cases of People with Psychological Problems (ODMK). The prevalence of schizophrenia in DKI Jakarta is 1.1 / 1000, and the prevalence of ODMK is 5.7 / 1000.¹⁶

Urban conditions that are increasingly out of control due to excessive urbanization have created new problems such as increasing crime due to poverty, massive unemployment, increasing slums, and so on. The most essential stimulation according to Simmel includes views, sounds, smells, actions of others, so that individuals respond to protect themselves and adapt to their minds and hearts. With the stimulation and the way the individual responds, it makes the individual more intellectual, rational, and emotionally distant from others. This is possible for individuals to experience personality disorders.¹⁷

Therefore, as an urbanization city, we need to see a narrative of the prevalence of schizophrenia based on people, place and time. This study aims to visualize descriptively the prevalence of schizophrenia in South Jakarta Administrative city.

METHOD

The study design used in this study was *cross-sectional*. The research location is in South Jakarta Administrative City. The population is all cases of schizophrenia found in health services in 10 District Health Centers in 2017.

The operational definition of schizophrenia is a chronic disease in the form of a severe mental disorder characterized by a disruption in the thought process that influences behaviour.¹⁸ Schizophrenic patients experience positive symptoms and negative symptoms. Positive symptoms include hallucinations, delusions, and irregular speech and behavior. They also experience negative symptoms, for example, flat affect, apathy, and social withdrawal. Such conditions cause a malfunction in various aspects.¹⁹

This mental health assessment uses the same measure and method in Riskesdas 2007 and 2013, using the Self Reporting Questionnaire (SRQ) which consists of 29

questions in real terms in essential health services carried out by health workers in the South Jakarta Administrative City area.

Data sources were obtained from recording and reporting medical records in 10 District Health Centers in South Jakarta

Administrative City in 2017. The total population was 1,641 cases.

The characteristics seen were variables of gender, age, place of residence, regularity of treatment for schizophrenic patients to health services.

RESULTS

The distribution of prevalence of Schizophrenia at the Administrative City of South Jakarta in 2017 could be seen in the following table :

Table 1.
Schizophrenia Prevalence in the Administration City of South Jakarta in 2017

Sub-District Name	Amount of case	Prevalence /1000 Populations
Cilandak	203	0.99
Jagakarsa	198	0.50
Kebayoran Lama	132	0.42
Kebayoran Baru	161	1.14
Mampang Prapatan	127	0.88
Pancoran	162	1.06
Pasar Minggu	128	0.41
Pesanggrahan	165	0.73
Setiabudi	135	0.94
Tebet	230	1.12

The highest prevalence rate is found in Kebayoran Baru Subdistrict with a prevalence of 1.14 / 1000 while the lowest prevalence of schizophrenia is in Pasar Minggu District with a prevalence of 0.41 / 1000 residents

Table 2.
The Proportion of Schizophrenia in the Administration City of South Jakarta in 2017

Sub-District Name	Amount of case	Proportion Skizofrenia (%)
Cilandak	203	12
Jagakarsa	198	12
Kebayoran Lama	132	8
Kebayoran Baru	161	10
Mampang Prapatan	127	8
Pancoran	162	10
Pasar Minggu	128	8
Pesanggrahan	165	10
Setiabudi	135	8
Tebet	230	14

The largest proportion of 1,641 schizophrenia cases in the South Jakarta Administrative City of 14% came from Tebet District. The second largest proportion of 12% came from 2 sub-districts, namely from Cilandak and Jagakarsa Districts.

Table 3.
The proportion of Sex of Schizophrenia in the Administration City of South Jakarta in 2017

Sub-District Name	Man (%)	Women (%)
Cilandak	65	35
Jagakarsa	61	39
Kebayoran Lama	57	43
Kebayoran Baru	65	35
Mampang Prapatan	54	45
Pancoran	64	36
Pasar Minggu	62	38
Pesanggrahan	60	40
Setiabudi	58	43
Tebet	73	27

In general, the proportion of sex schizophrenia in men is the most dominant than women. The highest proportion of male sex is 73% in Tebet, and the highest proportion of women in Mampang Prapatan Subdistrict is 45%.

Table 4.
The proportion of Schizophrenia Based on Age Group (Year) in the Administration City of South Jakarta in 2017

Age Group (Year)	Amount of Cases	Proportion (%)
<15	10	1
15-25	136	10
26-45	764	56
>46	442	33

The proportion of schizophrenia cases was highest in the age group 26-45 years as many as 56% and the lowest in the age group <15 years at 1%. When compared to the overall data per sub-district, Tebet is the complete area of data quality. Thus we can see the proportion of schizophrenia in Tebet Subdistrict who seek treatment in health services.

Table 5.
The proportion of Schizophrenia in Tebet Subdistrict who treated to Health Services in 2017

Criteria	Amount of Cases	Proportion (%)
Treated at the Puskesmas	194	84
Referred to hospital	36	16
Not regularly seek treatment at the Health Center	128	56
Regularly seek treatment at the Health Center	102	44

Based on the table above of 230 schizophrenia cases in Tebet Subdistrict, the proportion of schizophrenia in Tebet Subdistrict treated in Puskesmas was 84% and those referred to the Hospital

were 16% whereas the proportion of irregular medical treatment at the Puskesmas goes to health care for one year from January d.d. December 2017 is 56%.

Table 6.
The proportion of Schizophrenia by Gender, Age Group and Treatment History Based on the Regularity of Treatment at the Tebet Community Health Center for One Year in the Administration City of South Jakarta 2017

Variables	Irregularly treated at the Health Centre for a year		Regular treatment at the Health Centre for a year	
	n	%	n	%
Gender				
Man	95	56.89	72	43.11
Women	38	60.32	25	39.68
Age Group				
<15 Years old	4	80.00	1	20.00
15-25 Years old	25	89.29	3	10.71
26-45 Years old	37	42.05	51	57.95
>45 Years old	29	50.00	29	50.00
Medical History				
Health Centre	103	52.02	95	47.98
Refer to the Hospital (Referral Program to the Puskesmas)	30	93.75	2	6.25

The proportion of irregular sex treated was 56.89%, the proportion of the irregular age group treated the majority in the 26-45 year age group was 42.05%, and the proportion of treatment history from patients referred to irregular hospitals was re-treated to the Puskesmas Tebet is 93.75%.

DISCUSSION

The population in South Jakarta Administrative City in 2017 is 2,232,614 people with schizophrenia as many as 1,641 cases. The prevalence of schizophrenia rate in DKI Jakarta Province in 2017 is 1.1 / 1000. The number is not much different compared to the prevalence of schizophrenia rates in South Jakarta Administrative City in 2017 which is 0.7 / 1000 or 7 / 10,000.

When compared overall, the highest prevalence rate in the area Subdistrict is in Kebayoran Baru Subdistrict with a prevalence of 11.4 / 10,000, meaning that for 10,000 residents in Kebayoran Baru Subdistrict there are 11 people with schizophrenia. While the lowest prevalence of schizophrenia is in Pasar Minggu Subdistrict with a prevalence of 4.1 / 10,000 population, meaning that for 10,000 residents in Pasar Minggu Subdistrict there are four people with schizophrenia.

The prevalence of schizophrenia in the DKI Jakarta Province is also still under the Canadian state. This is evidenced by a population-based research study conducted (the estimated prevalence of one year of schizophrenia) in Canada is 7.5 to 17 per 10,000.²⁰

In proportion, the most significant number of schizophrenia cases in the South Jakarta Administration City came from Tebet Subdistrict, which amounted to 14%, followed by the second largest 12% from 2 Districts, namely from Cilandak and Jagakarsa Districts.

In 10 sub-districts in the Administrative City of South Jakarta, the proportion of men was more significant than that of women with a ratio of 1 (female): 2 (male). Overall, the area of South Jakarta Administrative City in 2017 is the most dominant proportion of sex schizophrenia in men, which is 60% compared to 40% of women. If we see table 1.1. The highest proportion of male sex is

73%, and the lowest male is 27% in Tebet District. For the highest proportion of women in Mampang Prapatan Subdistrict at 45% and the lowest women in Cilandak and Kebayoran Baru Subdistricts at 35%.

Differences in proportions were also found in the research conducted by Wijayanti (2014), which was a cross-sectional study, 25 respondents were schizophrenic in the work area of Kasihan II Bantul Yogyakarta Public Health Center, in the Ngestiharjo Village using consecutive sampling techniques, It is seen that people with schizophrenia with male sex are more than female sex, male sufferers are 72%, while female sufferers are 28%.²¹

This is following the theory which states that the prognosis and the course of the disease in men are worse than in women sufferers so that it is more quickly seen, the cause can be due to genetic, environmental or internal influences. Likewise, with the theory that schizophrenia was diagnosed in 12 men and ten women, it was due to a decline in onset in women. The reason was given for explaining why there is a decline in onset in women, namely the presence of a protective or neuroprotective effect of female hormones and a high potential for experiencing head injury in men compared to women.²²

Forage characteristics, the highest proportion of schizophrenia in the Administrative City of South Jakarta in 2017 in the age group 26-45 years is as much as 42.05% and the lowest in the age group <15 years is 1% if we look more dominant at a young age because schizophrenia cases in the South Jakarta Administrative City area are more prevalent in the younger age group.

The majority of the productive age groups who suffer from schizophrenia were also found in a study conducted by Novitayani (2016) which was a descriptive type of study with the population being all outpatients in the RSJA BLUD polyclinic which showed that the age of the respondents was in the range of 25-44 years at 55.7%.²³

There are cases of schizophrenia that can be controlled or treated at the Puskesmas, but some are referred to hospitals to get further treatment. The proportion of schizophrenia in Tebet Subdistrict treated in the Puskesmas was 84%, and those referred to the Hospital were 16%.

Treatment continuity in the management of schizophrenia is one factor in the success of therapy. Patients who do not adhere to treatment will have a higher risk of recurrence compared to patients who adhere to treatment. This disobedience to treatment is the reason for returning to the hospital.²⁴ One of the causes of relapsing schizophrenia is an irregularity in treatment, to see the regularity of data on treatment taken data at the Tebet Sub-District Health Center because the Tebet Sub-District Health Center is of full quality compared to other regions. As many as 230 cases in Tebet Subdistrict, 84% were handled in Puskesmas, and 16% were referred to hospitals, there were two criteria for patients referred to, namely schizophrenic patients with nervous and violent behavior. The proportion of irregular sex treated is male as much as 56.89%, and in the age group 26-45 years as much as 42.05%, this is due to.

The Administrative City area of South Jakarta, male schizophrenics is higher than women. This is following the research conducted by Yulastuti which is a descriptive analysis survey research that is directed at explaining a situation or situation by recording data on 42 patient medical records and schizophrenic prescription sheets. Referral Program at Mungkid Health Center January-June Period 2014, showed that the proportion of male patients was 54.76%, while the proportion of female patients was 45.24%. The influence of culture can also affect the height of male patients because men are the family pole so that if symptoms cannot be overcome, the family will bring them to the hospital faster.²⁵

For the proportion of irregular age groups seeking treatment at the Tebet Sub-

District Health Center, the majority in the 26-45 year age group was 42.05%. In contrast to the irregular age group treated in a study conducted by Rawa with a cross-sectional study design on the object of the family research of schizophrenic patients as many as 88 respondents in the Polyclinic of the Mental Hospital Prof. Dr. V. L. Ratumbuang Manado in 2014 was in the age group > 41 years with a proportion of 49%.

Service Referral Program is a Health Service that is given to patients with chronic diseases with stable conditions and still need treatment, or long-term nursing care carried out in the First Level Health Facilities on recommendations/referrals from specialist doctors / sub-specialists who care. One of the diseases that include the service of the Referral Program is schizophrenia.²⁵

Schizophrenic patients who were referred to the hospital if they were under control would then be referred to the Puskesmas again (Referral Program) at the Puskesmas. It turns out that schizophrenic patients who were referred back to the Puskesmas found a proportion of 93.75% were not regularly treated again at the Puskesmas. Even schizophrenic patients who were treated in the Puskesmas with a proportion of 52.02% were not regularly treated to the Puskesmas, non-compliance with treatment would be at risk for recurrence.

This is reinforced in the Rawa study which is a quantitative study conducted at the Prof. RSJ. Dr. V. L. Ratumbuang, North Sulawesi Province in February-April 2017, the population in this study was the nuclear family of patients with schizophrenia who were outpatient and listed in the medical record at the Polyclinic of the RSJ Prof. Dr. V. L. Ratumbuang, North Sulawesi Province and the sample in this study were 66 respondents who showed that there was a relationship between medication adherence and the prevalence of recurrence in

schizophrenic patients. Compliance with taking medication for schizophrenic patients outpatients in the mental polyclinic have an excellent impact on patients with schizophrenia so that the prevalence of recurrence of schizophrenic patients for one year has never been. This is because of the patient's routine treatment.

The bias that might occur in this study is information bias because there are still missing data and measurement errors when schizophrenia is misclassified.

CONCLUSION

The proportion of schizophrenia in men in South Jakarta Administrative City is higher than women, with a ratio of 2: 1. The highest proportion of male schizophrenia is in Tebet Subdistrict and women in Mampang Prapatan Subdistrict. In South Jakarta the largest proportion of schizophrenia is in the 26-45 year age group in Cilandak Subdistrict, Cilandak Community Health Center handles schizophrenia more because early mental illness detection programs are better than other regions, Jagakarsa Health Center is further strengthened for schizophrenia cases, given the number most densely populated than other regions. Biologically, schizophrenia is more often experienced by men than women, because the female hormone estrogen is somewhat protective, so the tendency to get schizophrenia is more prolonged than men. Also, more men are rampaging, so the treatment of male schizophrenic patients is different from those women. Treatment continuity in the management of schizophrenia regularly in schizophrenic patients is essential, because the recurrence rate is very high if appropriate treatment and treatment is not taken.

REFERENCES

1. Ayuningtyas D, Rayhani M. Analisis Situasi Kesehatan Mental Pada Masyarakat Di Indonesia Dan Strategi Penanggulangannya Analysis Of Mental Health Situation On Community In Indonesia And The Intervention Strategies Pendahuluan Kesehatan mental atau kesehatan jiwa merupakan aspek pe. 2018;9(1):1–10. Available from : <http://www.jikm.unsri.ac.id/index.php/jikm/article/download/716/pdf>
2. Jiwa K, Rahmat D, Yang T, Esa M, Indonesia PR. Lembaran Negara. 2014;(185). Available from: ditjenpp.kemendiknas.go.id/arsip/ln/2014/uu18-2014bt.pdf
3. RISKESDAS. Penyakit yang ditularkan melalui udara. Jakarta Badan Penelit dan Pengemb Kesehat Dep Kesehat Republik Indones [Internet]. 2013;(Penyakit Menular):103. Available from: http://www.academia.edu/download/36235491/Laporan_riskesdas_2010.pdf
4. Sandmire HF, Austin SD, Bechtel RC. Experience with 40,000 Papanicolaou smears. *Obstet Gynecol.* 2017;48(1):56–60. Available from: https://www.researchgate.net//272669573_Cervical_Cancer
5. Kurniawan Y, Sulistyarini I. Komunitas Sehati (Sehat Jiwa dan Hati) Sebagai Intervensi Kesehatan Mental Berbasis Masyarakat. *Insa J Psikol dan Kesehat Ment [Internet]*. 2017;1(2):112. Available from: <http://e-journal.unair.ac.id/index.php/JPKM/article/view/2999>
6. Analog UH. User ' s Guide RedLab 1208HS-4AO. 13(2):135–48.
7. Terapi P, Kelompok S, Beban T, Mekanisme DAN, Keluarga K, Merawat D, et al. (The Effect Of Supportive Group Therapy On The Burden And Coping. 2017;2(2). Available from: <https://media.neliti.com/197117-ID-the-effect-of-supportive-gr...>
8. Demirbas H, Tugba E, Kizil O. Burnout and Related Factors in Caregivers of outpatients with Schizophrenia. 2017;1–11. Available from: <https://www.heighpubs.org/hda/ida-aid1001.php>
9. Puspitasari EP. Peran Dukungan Keluarga Pada Penanganan Penderita Skizofrenia. *Fak Psikologi, Univ Muhammadiyah Surakarta.* 2009;1–10. Available from: eprints.ums.ac.id/4929/1/F100050253.PDF
10. Vianny J and. *Gangguan Psikiatrik. Psikologi.* 2016;
11. Kao C. Demensia. :1–11. Available from: <https://www21.ha.org.hk/.../EM/.../Dementia-Indonesian.pdf?ext>.
12. Bali IC. Strengthening Mental Health Systems through Community-based Approaches Strengthening Mental Health Systems through Community-based Approaches. 2010;(December):19–22. Available from: www.searo.who.int/entity/mental_health/.../sea-ment-163.pdf?ua...
13. Kemenkes. Kementerian Kesehatan Republik Indonesia [Internet]. Peran Keluarga Dukung Kesehatan Jiwa Masyarakat. 2016 [cited 2018 Nov 20]. Available from: <http://www.depkes.go.id/article/print/16100700005/peran-keluarga-dukung-kesehatan-jiwa-masyarakat.html>
14. Dombeck RN& M. Schizophrenia Symptoms, Patterns and Statistics and Patterns [Internet]. 2009 [cited 2018 Nov 20]. Available from: <https://www.mentalhelp.net/articles/schizophrenia-symptoms-patterns-and-statistics-and-patterns/>
15. Bhugra D. The global prevalence of schizophrenia. *PLoS Med.* 2005;2(5):0372–3. Available from: <https://journals.plos.org/plosmedicine/article?id=10.1371/...pmed...>
16. Jakarta SPTMD. Laporan prevalensi Orang Dengan Masalah Kejiwaan dan Orang Dengan Gangguan Jiwa Berat di DKI Jakarta Tahun 2017. 2017.
17. Ramdhani Harahap F. Dampak Urbanisasi Bagi Perkembangan Kota Di

- Indonesia. *J Soc.* 2013;1(1):35–45. Available from: <https://media.neliti.com/.../130628-ID-dampak-urbanisasi-bagi->
18. Dixon L, Perkins D, Calmes C. *Guideline Watch (September 2009) Practice Guideline for the Treatment of Patients with Schizophrenia.* Accessed Novemb [Internet]. 2009;13(September). Available from: https://psychiatryonline.org/pb/assets/raw/sitewide/practice_guidelines/guidelines/schizophrenia-watch.pdf%0Apapers3://publication/uuid/A49D74F1-8303-43C4-AC19-AFF93F7FD6BB
 19. Sari SP, Wijayanti DY. *Keperawatan spiritualitas pada pasien skizofrenia.* *J Ners* [Internet]. 2014;9(1):126–32. Available from: <https://e-journal.unair.ac.id/JNERS/article/download/3262/2353>
 20. Dealberto MJ. *Increasing prevalence of schizophrenia in Canada - BC PsychosisBC Psychosis.* *Psychiatry Res* [Internet]. 2014 [cited 2018 Dec 18]; Available from: <http://bcpsychosis.org/2014/11/19/increasing-prevalence-of-schizophrenia-in-canada/>
 21. Wijayanti A. *Hubungan Onset Usia dengan Kualitas Hidup Penderita Skizofrenia di Wilayah Kerja Puskesmas Kasihan II Bantul Yogyakarta.* *Mutiara Med.* 2014;14(1):39–45. Available from: <https://media.neliti.com/media/.../156492-ID-hubungan-onset-usi...>
 22. Kaunang I, Esrom K, Kallo V. *Hubungan Kepatuhan Obat Dengan Prevalensi Kekambuhan Pada Pasien Skizofrenia Yang Berobat Jalan Di Ruang Poliklinik Jiwa.* *Keperawatan.* 2015;2(2):1–7. Available from: <https://media.neliti.com/107679-ID-hubungan-kepatuhan-min>
 23. Novitayani S. *Karakteristik Pasien Skizofrenia dengan Riwayat Rehospitalisasi.* *J Kesehat Idea Nurs J* [Internet]. 2016;VII(2):23–9. Available from: <http://www.jurnal.unsyiah.ac.id/INJ/article/download/6442/5279>
 24. Rawa F, A.Joy, M.Ratu, Posangi. 3. Felly Rawa, A. Joy. M. Rattu, J. Posangi. *Faktor-faktor yang Berhubungan Dengan Kepatuhan Minum Obat Pada Penderita Skizofrenia di Rumah Sakit Jiwa Prof. DR. V. L. Ratumbuang Provinsi Sulawesi Utara Tahun 2017.* *ilmu Kesehat Masy Pascasarj Univ Sam Ratulangi.* 2017;1–14.
 25. Yuliasuti F, Mega Kusuma T. c. *Pola Pengobatan Pasien Schizoprenia* 2015;06:63–70. Available from: <https://studylibid.com/doc/39868/pola-pengobatan-pasien-schizoprenia-program-rujuk>