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## RESEARCH ARTICLE

### Health Professional's Perceptions Toward Recovery of Patients with Schizophrenia in Community

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#### Abstract:

#### Background:

Perceptions of health professionals contribute to the process of service provision to recover patients with schizophrenia. Thus, different perceptions of mental health professionals toward recovery of patients with schizophrenia can affect decision making in providing services.

#### Aim:

This study aimed to describe the perceptions of health professionals toward recovery of patients with schizophrenia in the community.

#### Methods:

This study was designed as a qualitative study by involving 12 participants of professional health workers, consisting of two psychiatrists, two psychologists, two nurses and two doctors from a public health center, two social workers, and two officials from the health department in Yogyakarta province. The research was conducted with purposive sampling using in-depth interviews, with a semi-structured question method. The transcribed interview results were then analyzed.

#### Results:

The research results identified four themes, namely: definition of recovery, type of recovery, recovery characteristics, and differences in perceptions about recovery. Recovery is defined as a condition of normal return, which covers physical, psychological, social, economic and spiritual aspects. There are three types of recovery, namely total recovery, clinic recovery, and social recovery. Some professional health workers perceive that schizophrenic patients can achieve total recovery, while some others consider that patients will never achieve a total recovery.

#### Conclusions:

Although the perceptions of different health professionals have the same dimensions of recovery (definition, type, characteristic of recovery), there are different points of view in each of this dimension.

**Keywords:** Community, Health recovery, Patient, Perception, Professional Psychiatry, Schizophrenia.

#### Article History

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## 1. INTRODUCTION

The Basic Health Research (Riskesdas) in 2013 revealed that the prevalence of serious mental disorders in Indonesia

amounted to 1.7 per 1,000 people, meaning that among 1000 people there are one to two people who suffer from severe mental disorders, including schizophrenia [1]. The number is largely untreated, which limits these schizophrenic patients from functioning socially, resulting in impairments in social relationship and in the community. The high prevalence of

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serious mental disorders in Yogyakarta which is 2.7 per 1000 people, exceeds the national figure [2]. Schizophrenia is one type of severe psychiatric disorder, which is thought to be a multifactorial condition, involving a variety of factors that together contribute to the occurrence of this disorder [3].

According to Murray *et al.* [4], mental and behavioral disorders accounted for the number of Disability-Adjusted Life Years (DALYs) in 1990 of 5.7% and this number increased in 2010 to 7.4%. Schizophrenia is one of the five main causes of disease burden accounting for 0.6%.

Chi study [5], conducted in Hong Kong and Taiwan, found that 70.5% of patients with schizophrenia had a relapse within ten years with an average recurrence of 1.9 years. High recurrence rates and high costs lead to the identification of the patient's recurrence predictors.

Recovery research conducted by Subandi in Indonesia [6] showed the three-staged recovery process. The stages are: rise: gaining insight, effort: struggling to achieve recovery, and harmonious integration with the community. Subandi's research explains the process of awareness that participants experience when they begin the recovery, and the attempts made until they can interact with the community. Research abroad found seven phases of recovery process, namely: experiencing schizophrenia as a 'descent into hell', igniting a spark of hope, developing insight, activating the instinct to fight back, discovering the keys to well-being, maintaining a constant equilibrium between internal and external forces, and perceiving 'light at the end of the tunnel' [7]. A study in Canada by Noiseux and Ricard [7] explained the recovery process experienced by patients, but did not specifically describe the healthcare community's perception toward recovery of patients with schizophrenia.

The concept of recovery is not yet a priority in mental health, whereas psychiatric patients, especially those with schizophrenia, are in dire need of recovery-oriented services for long-term life direction [8]. One of the government's efforts to ensure the provision of this service is by stipulating a legal umbrella under the Law of Mental Health in Indonesia. The Mental Health Law in Indonesia is structured to protect patients with mental disorders, especially schizophrenia to impose a more comprehensive and integrated treatment of this group by embracing many aspects including education, therapy and psychological support to people with schizophrenia to regain their social function in the society [2]. This law enacts humane treatment for the patients with mental illness and protects them from any shackling. However, we need to take heed more on patient's handling after the liberation from the shackles, instead of merely letting them out of the shackles [9]. Deprivation in psychiatric patients in Indonesia is a prevalent phenomenon indicating poor patient recovery process. This dilemma may be due to the lack of comprehensive perceptions of health care workers about patient's recovery and the way to recover them from the mental illness.

It is disheartening that the current trend in Indonesia is in contrast to various studies conducted abroad about community integration in the handling of patients with mental illness in the community. According to Pahwa, Bromley *et al.* [10],

community integration is crucial in the recovery process. There are three dimensions in community integration, namely physical, psychological and social integration. Physical integration describes the extent to which a person performs activities in the community, the psychological integration involves feeling a part of the community, and social integration is the interaction and role in society [11]. Other research has shown that community integration is important in the recovery process and is a marker of patient well-being [12]. During the recovery process, the patient seeks to relinquish his illness and establish his personal identity to regain their meaning in life and to be socially functioning in the community [12]. Nurjannah, FitzGerald, and Foster's research [13] mentions that in Indonesia, patients who decide to escape from the hospital are actually in the process of recovery. This is so because during the recovery process, patients normally experience three things, namely: the call to go home, the condition between hope and reality, and the difference of perception between us (patient) and they (other than patients). These studies emphasized the importance of community integration for the recovery process of psychiatric patients. However, the fact remains that in Indonesia, this essential part of the recovery process has not been explored specifically in the community, especially regarding the perceptions of healthcare providers in the community who directly involve themselves with the recovery process for patients with mental disorders such as schizophrenia. The perceptions of health personnel will affect the service provision and the service outcome of the schizophrenic patients in the recovery process.

This correlation between perceptions about the recovery process and health service outcomes highlights the need for research on the health professionals' perceptions toward recovery of patients with schizophrenia to explore the perceptions of health professionals about recovery in patients with schizophrenia in the community.

## 2. METHODS

The research was conducted in The Special Region of Yogyakarta Indonesia using qualitative method with purposive sampling technique. It involved a total number of 12 samples of health professionals consisted of: two psychiatrists, two psychologists, two nurses in charge of mental health programs at a public health center, two doctors at a public health center, two social workers in a rehabilitation center for mental disorders, and two officials from the city health department. Participants are experienced with the treatment of patients with schizophrenia for at least three years. Data were collected through in-depth interviews. The list of questions provided included: the definition of recovery, recovery features, and the view of health professionals about the recovery process of schizophrenic patients. The researchers also created field notes to describe situations not recorded by the recorder in the interview process. Interviews were recorded on the basis of the participants' consent. Validation of data was done by triangulation of data sources, triangulation of analysis, and validation with participants. Data analysis was done by transcription, repeated reading of interview transcripts and field notes, identifying meaningful quotations and statements, creating categories, and defining sub themes and main themes.

The process of data collection was approved and permitted by the Medical and Health Research Ethics committee with the number KE / FK / 1269 / EC / 2016.

### 3. RESULTS

This study involved twelve health practitioners as the research participants. The age of the participants varied, ranging from 33 years old to 58 years old. The participants consisted of two men and ten women with various range of education background ranging from High School diploma, Undergraduate, Specialist, and Master degree. Nine of the participants were Muslims, one was Catholic, and two were Christians. The shortest experience of interacting with psychiatric patients was three years and the maximum was 20 years.

The results of the study showed that these health professionals did not share similar perceptions of patient's recovery. Their different perceptions were mainly attributed to four themes including the definition of recovery, the type of recovery, characteristics of recovery, and specific different aspects of recovery. The variations in the health professionals' perceptions of recovery are described below.

There are four themes found from the healthcare professional's perception as described in the followings.

#### Theme 1: Definition of recovery

Participants define recovery as regaining a normal condition as before suffering from mental disorders. In other words, these health practitioners believe that recovery means that the disease disappears, the symptoms are reduced, the patients no longer have to take medication, the phase after six months remission, the patients become independent, they can do an activity, interact, and communicate effectively, as disclosed in the following statements:

"..... can be independent, do not have to take medication." (P6)

"..... the symptoms are minimal, the social role function improves." (P9)

"..... they regain their normal condition before suffering from the disease.. ... they behave like a healthy person, they can move, interact, and they can communicate effectively." (P12)

"..... recovery is the phase after six months of remission .." (P6)

#### Theme 2: Type of recovery

Participants explain three types of recovery: total recovery, clinical recovery, and social recovery. Total recovery is when the patients no longer have to rely on medicine, show no signs of mental disorders, and no residual symptoms. Clinical recovery is when patients are still taking medication, may have residual or no symptoms, and potentially experience recurrence. Social recovery is when the patient have been able to interact normally with people in their surroundings although they still have some residual symptoms as revealed in the following statements from participants:

"..... total recovery is when the patients no longer have to depend on medicine, show no psychological disturbance, and no symptoms of mental disorder." (P1)

"..... clinical recovery is when the patient is mentally disordered then he is medically treated. He may still have the rest of the symptoms or not, and thus he still has to keep taking the medicine. Otherwise, he will lose his balance, or his symptoms may recur ....." (P11)

"..... social recovery refers to the ability of a person, who had been fighting with mental disorder, to regain social interaction and social connection with his surroundings. When he is declared to recover, he resumes his social function, as he can interact normally even though he still has the rest of the symptoms." (P11)

#### Theme 3: The characteristics of recovery

Participants reveal that recovery is seen from some aspects ranging from physical, psychological, social, economic, and spiritual aspects. Physical aspect is apparent from a neat appearance, and the ability to meet the needs of daily Activities of Daily Living (ADL) independently. In addition, the symptoms of mental disorder are reduced or lost, the patients have decreased the medical dose and frequency of medication taking, and they can already manage the drug itself, as disclosed as follows:

"..... they can manage to fulfill their own necessity such as bathing and defecating, and urinating in the rest room. Then they can wash their clothes and take a meal without other's command." (P4)

"..... in terms of medication, the patient is also willing to take medication on a regular basis. Thus, they know when to consume the drugs to avoid skipping the drug and to prevent the symptom recurrence." (P3)

The psychological aspects are conditions in which the patient with schizophrenia has positive coping, in that he is able to control symptoms such as hallucinations, has self-awareness when he will experience recurrence and how to cope with it, has initiative, and can adapt to the condition, as revealed in the followings:

"..... he has a positive self-defense mechanism for example if ... he's in a crisis or he's hallucinating again he has his own way to get rid of it or to overcome it." (P4)

"..... he is said to recover when he knows how to control the disease. He knows well when he feels the symptoms recurrence and he understands how to deal with it. Thus, he is well-aware of his the symptoms." (P1, P7)

The social aspects are conditions in which the patient is able to communicate better, fostering domestic relationships and having offspring without experiencing a recurrence, while functioning in the family and society, as expressed as follows:

"..... can communicate a bit longer." (P4)

"..... can socialize with the surrounding environment." (P2)

"..... can interact with community." (P1)

"..... are dare to marry and have children." (P1)

The economic aspects are conditions in which the patient is able to work, be productive, earn money, and can be trained and make sustainable efforts at home, as expressed as follows:

“..... can do anything for work or do something to earn money.” (P4)

“..... the differences between patients who have recovered and who have not, can be seen from their effort after taking part in the work training. Those who have recovered normally can apply the skills they learn from the training, but those who have not recovered generally are unable to take benefit from such trainings.” (P6)

The spiritual aspects are conditions where the patient is able to follow religious activities such as recitation or congregational prayer at the mosque or church, while interacting with other congregation members and pilgrims as disclosed below:

“..... for Muslims, they can attend Islamic forums or go to mosque for praying to meet and chat with the neighbors.” (P1)

#### Theme 4: Differences in perceptions about recovery

There were participants who had a positive perception of recovery for patients with schizophrenia. Participants perceived that patients with schizophrenia can recover without having to take drugs especially for patients who are an early suspected schizophrenia and receive adequate treatment, as expressed as follows:

“..... an early suspected schizophrenia, on its diagnosis may then be quickly handled properly so, you know, with the good and adequate therapy management can recover well. Thus, I believe that they can be totally cured.” (P11)

Participants who have a negative perception believe that patients with schizophrenia will never heal entirely, as they cannot recover completely. They will always have to take medication and even can experience drug dependence, as revealed below:

“Totally recovered? There seems to be no recovered criteria for schizophrenia. There are only better or worse phase criteria. Therefore, schizophrenia... can only improves or worsens.” (P2)

“..... to be totally recovered, a patient should have no medicine reliance, no disturbance, and show no signs of mental disorders. However, there are no such things (laugh). What I mean is that nobody is completely cured (laugh) since being recovered means that he should no longer have to take medicine, This is impossible because the patient should continue to take the schizophrenia drug anyway.” (P1)

“..... schizophrenics should endure with the treatment.” (P5)

“..... actually, one cannot recover completely, because he is drug dependent.” (P12)

## 4. DISCUSSION

Participants define recovery as a condition of returning to normal, *i.e.* the initial condition before the patient has a mental illness. In this recovered condition the patient has decreased

symptoms of mental disorders. Some patients are still taking psychiatric drugs, while some others do not rely on psychiatric medication. They can play a social role and function in daily life, have daily interactions, regular activity, communicate effectively and less likely to relapse. The definition of recovery found in this study when compared to the definition of recovery according to some researchers conducted overseas has some differences. Andresen, Oades, and Caputi [14] define that recovery shall contain four aspects, namely: fulfillment of expectation of being self-supporting, the development of a positive identity, the discovery of the meaning of life and taking responsibility for the lives of others. However, this study only concerns with the social aspect, while Andresen, Oades, and Caputi [14] mention the mental quality of patients during recovery. The implication of this view is improper patient handling and lack of attention on their mental quality, while they are expected to fulfill their role in the society. A person is said to be able to perform his role if he can exercise his rights and obligations according to his position. This study did not find any indications that to be able to play a role and function socially, the patients are influenced by their psychological condition and confidence. This means that health professionals in Indonesia may only consider the outcome, while the process of becoming more capable of playing a part in the society is not supported by the professional health workers or to be subject to intervention. Research [7] mentions that recovery is an individual journey that takes a long time, extensive support, and endless patience. During the process, the course of recovery is accompanied by symptoms and recurrence. One study by Noiseux and Ricard involved 16 samples of patients with schizophrenia, 5 families, and 20 professional health workers showed that in the course of recovery, patients still have symptoms of mental disorders and may experience recurrence. In contrast, in Indonesia, health workers do not see the recurrence of mental illness as part of the recovery that needs proper handling.

More comprehensively, Jääskeläinen *et al.* [15], defined recovery as two-year absence of treatment, GAF score > 61, two-year normal range of clinical and social function two-year of independent living, not admitted to a mental hospital for five years, and not taking medication or low doses of psychotic drugs. This definition of recovery from the meta-analysis is related to the timeframe of recovery, while the results of our study show that health professionals do not disclose the duration of time associated with a patient when considering recovery. Since there has never been any research addressing recovery in Indonesia, there are no data that describes the number of patients in Indonesia who experienced recovery or the timeframe for recovery. This implies that there are no indicators for the measurement of the patient in a recovery condition nor evaluation of treatment/intervention provided and purpose of the patient's treatment. In Indonesia, health workers also do not mention indicators related to the use of instruments such as the Global Assessment of Functioning Scale (GAF Scale) or other references to assess the patient's recovery. Hence, this will lead to no evaluation of whether or not the patient has reached recovery and result in no follow-up of interventions to help patients achieve recovery.

The systematic review of various countries (USA,

European, Canada, China, India, Israel, and Thailand) conducted by Jose *et al.* [16] described the perceptions of recovery in four categories: self-orientation, family orientation, social orientation, and disease orientation. The first category is self-orientation, highlighting the importance of the patients' self and the improvement of the patients' function. The review also explains that recovery is the process of restoring the patients' potential before the illness or pre-morbid function, which corresponds to the results of this research seeing recovery as a return to the conditions before illness. The results of this research in Indonesia also found the characteristics of self-orientation that involves the improvement of physical aspects, one of which is the patient's ability to meet their basic needs such as Activities of Daily Living (ADL). The second and third categories of family orientation and social orientation are explained as one aspect of this research, the social aspect. Family orientation is described as a condition that is closely related to family interactions, work and family life. Social orientation is similarly defined as the ability to communicate effectively with others. However, there are some differences in Indonesia where patients with schizophrenia are not considered able to receive important roles and responsibilities in social life. This is due to a commonly shared negative view on the ability of patients with schizophrenia in Indonesia. The fourth category is disease orientation, which is also defined not only as symptom-free, but also the patients' ability to understand the disease by knowing how to manage symptoms, administer medication, and how to manage their lives. However, in our findings, there are recovery features not included in the four categories formulated by Jose *et al.*, that is the spiritual aspect, which includes the ability of the patient to participate in the religious community activities. Research in Indonesia explains that the patients are said to recover from schizophrenia when they can attend religious activities such as worship, recitation, Islamic forum attendance and having congregational prayer.

According to Warner [17], there are three classifications of recovery: complete recovery, social recovery and hospitalization. Complete recovery is the absence of psychotic symptoms and the ability of the patient to return to functioning as before the illness. Social recovery is the ability of a patient to be economically self-sufficient in his or her own residence and lack of social disturbance. Hospitalization is the time that patients experience in a mental hospital. According to Ng *et al.* [18], most patients assume that full recovery is if the patient does not take any more drugs, has a steady job, and gets support from family and friends. The results of the systematic review by [16] explain full recovery as when the patient has returned to work, has a social network and is well-accepted in the social life. Some participants also said that complete recovery is when patients are not taking psychiatric medication because taking the drugs is seen as a sign of a mental illness. The similarity between the current research and that of the previous literature is the use of the terms total recovery and social recovery. Total recovery is indicated when the patient is able to function as before their illness and no longer have to take any psychiatric medications even though the risk of recurrence remains. Meanwhile, social recovery is when the patient is able to interact with family and the surrounding community and can establish an intimate relationship for

marriage and for having children. In this study, the ability of patients to return to work is a distinctive feature classified in the economic aspects. One term in this study not used by Warner [17] is clinical recovery, where the patient has been treated but still has symptoms and still taking psychiatric medications. Hospital care by professional health professionals in Indonesia is not one of the indicators of recovery, while according to the literature from western countries, patients are said to recover although they still require hospitalization. This difference highlights that health professionals in Indonesia consider the treatment process at the hospital not as a part of patient recovery, meanwhile hospitalization is accepted in the western countries as part of recovery. This trend implies that in the western countries, mental patients are better accepted than those in Indonesia even though they undergo recovery process remission hospitalization. Meanwhile, in Indonesia when a patient with mental illness is re-hospitalized, they will be seen as having little chance to recover. This fundamental difference in the professional perception of recovery will affect how health professionals assist their patient's treatment to achieve recovery.

According to Fontaine [19], recovery is an aspect of rehabilitation, which refers to the combination of limitation as part of reality, changing dreams and aspirations, exploration of new ideas and adaptation to the sickness. Accordingly, the journey of each person to recovery is unique. Based on Stuart [20], recovery is defined as a process when someone is able to live, work, learn and participate fully in the community. Newell and Gournay [21] explained that recovery is not merely the reduced symptoms of mental disorder but the combination of patient's ability in the psychological, social, work, family and other aspects. Professionals in Indonesia describe that the recovery of patients with schizophrenia involves the ability of physical, psychological, social, economic and spiritual aspects. In addition, patients also have their own initiatives to fulfill daily needs and can be trained with satisfactory results. In Indonesia, physical aspects are an important part in the recovery process involving the change in their appearance when the patients look neat and clean. According to the research in Indonesia, the spiritual aspect is an essential part because each citizen of Indonesia is expected to adhere to religion/spiritual belief and maintain religious life. This is different from western studies, which describe religion/belief as a private matter, and that having no religiosity is totally acceptable. One thing in common between the current research finding and that of the western studies is that a patient is said to recover from mental illness when he can fulfil all aspects of recovery, rather than only fulfilling one aspect.

Lieberman *et al.* [22] formulated the definition of recovery with the following criteria: for at least two years, the patients show no clinically significant positive and negative symptoms, can work and socially function, maintain family relationships and harmonious partners, or can interact with others at least once a week, can live independently, feel satisfied in his life, have self-esteem and stable identity, participate in elections and be able to support themselves. All of the recovery criteria mentioned in the Lieberman *et al.* [22] study were found to be similar with this study. In addition to the those criteria, the results of this study add other recovery features including the

ability of patients to have a settle marriage and have children, a feature of recovery not found by Liberman *et al.* [22]. The additional feature of this recovery may be influenced by Indonesian culture emphasizing marriage and having children as a 'normal' standard for individuals in the community. This is different from the shared culture in some western countries considering a lifestyle without marriage (cohabitation) and even having children without marriage as 'normal' and acceptable to some people.

Research shows that recovery is a multidimensional concept, not only a lack of symptoms but involves a patient's adequate psychosocial function, and perceived well-being. Although the patient is not symptom-free, the illness is manageable, and does not interfere with others [23], patients are able to manage any signs of recurrence and make appropriate efforts to prevent recurrence.

#### 4.1. Differences In Perceptions About Recovery

This study demonstrates the different perceptions among health professionals about patients' recovery from schizophrenia. The negative perception that patients with schizophrenia can never recover is one form of stigma shared by the mental health workers. According to Wood *et al.* [24], there are three stigma attitudes received by patients with schizophrenia: a negative view of the patient, blaming the patient, and assumption that the schizophrenic patient will never recover. The stigma will ultimately inhibits the recovery process of patients with schizophrenia. Ng, Pearson, Chen, and Law [25] conducted a study of the perceptions of medical students and psychiatric trainees in Hong Kong about recovery in patients with schizophrenia. The result showed that both groups of respondents are pessimistic about the recovery from schizophrenia and respondents are also aware that stigma is an obstacle to recovery. The results of this study imply the necessity for the current models of education to find a more effective way to help change the attitude of health workers during the learning process. This change of view is possible when the health workers are still developing their views on the recovery of patients with schizophrenia.

The results of the previous studies explain that recovery can be achieved by patients with schizophrenia. Personal factors, including personal attributes and subjective experiences will help patients achieve recovery [26]. The results of Sarwono and Subandi [27] also explained that the aspects of cognition, affection, and conformity mutually support the quality of reintegration of patients with mental illness return to society.

The principles of service in rehabilitation of patients with mental illness to achieve recovery are called the 10 "C's": comprehensive, continuous, coordinated, collaborative, consumer oriented, consistent, competent, connected, compassionate, and cooperative [28]. Comprehensive mental health services are important because the psychiatric patients have different characteristics of personal, social and occupational limitations.

Patients require interaction with health professionals over a long period so access to appropriate medications and psychosocial services should be appropriate. Treatment should

be combined and coordinated with psychosocial services. The services should be integrated and multidisciplinary [28]. Different perceptions among health professionals about recovery in schizophrenic patients in the community will affect the objectives, action plans and expected outcomes.

The only drawback of this study is that the results cannot be used to explain other various cultures, which exist in other parts of the world, since this research is a local study and may only be applied in Indonesia.

#### CONCLUSION

On the basis of the analysis, it is conclusive that the perceptions of mental health workers toward recovery of patients with schizophrenia are classified into four themes, namely the definition of recovery, the type of recovery, the characteristics of recovery, and the differences in perceptions about recovery among health professionals in Indonesia. Generally, there are three types of recovery: total recovery, clinical recovery, and social recovery. The characteristics of recovery include physical (appearance, self-administered ADL, reduced or decreased symptoms, decreased drug dose), psychological (positive coping, self-awareness, and adaptation), social (communication, fostering households, functioning in the family and community), economic (workable, productive, and able to be trained), and spiritual (following religious activities such as reciting and praying in the mosque) aspects. The study recommends that mental health policy-makers establish a certain standard to equalize the perceptions of health professionals toward recovery of patients with schizophrenia to produce appropriate strategies to help patients achieve recovery.

#### AUTHOR'S CONTRIBUTIONS

All authors approved the final manuscript and agreed to submission to the Open Public Health Journal for publication.

#### ETHICS APPROVAL AND CONSENT TO PARTICIPATE

The process of data collection was approved by the Medical and Health Research Ethics committee of The Faculty of Medicine, Public Health and Nursing, Universitas Gadjah Mada, Indonesia with the number KE/FK/1269/EC/2016.

#### HUMAN AND ANIMAL RIGHTS

No Animals were used in this research. All human research procedures followed were in accordance with the ethical standards of the committee responsible for human experimentation (institutional and national), and with the Helsinki Declaration of 1975, as revised in 2013.

#### CONSENT FOR PUBLICATION

Informed written consent was obtained from all the participants prior to publication.

#### CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

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## REFERENCES

- [1] Riset Kesehatan Dasar Jakarta: Badan Penelitian dan Pengembangan Kesehatan Kementerian Kesehatan RI 2013 2018 March 22; [http://www.depkes.go.id/resources/download/general/Hasil%20Riske s das%202013.pdf]
- [2] Tribunnews.. Dua Dari 100 Orang Indonesia Alami Gangguan Jiwa Berat [Online] 2014 2017 December 3; http://www.peduliskizofrenia.org/sumber-daya/berita-keswa/item/dua-dari-1-000-orang-indonesia-alami-gangguan-jiwa-berat
- [3] Saptawati R. Prevalensi Gangguan Jiwa Berat Mencapai 1-2 orang dari 1000 Warga di Indonesia. 2014. [http://www.tri.co.id/post/berita/104224/nasional/prevalensi\_gangguan\_jiwa\_berat\_mencapai\_12\_orang\_dari\_1000\_war ga\_di\_indonesia.html] [cited 2015 30 November]
- [4] Murray CJ, Vos T, Lozano R, *et al.* Disability-adjusted life years (DALYs) for 291 diseases and injuries in 21 regions, 1990-2010. *Lancet* 2012; 380(9859): 2197-223. [http://dx.doi.org/10.1016/S0140-6736(12)61689-4] [PMID: 23245 608]
- [5] Chi MH, Hsiao CY, Chen KC, *et al.* The readmission rate and medical cost of patients with schizophrenia after first hospitalization - A 10-year follow-up population-based study. *Schizophr Res* 2016; 170(1): 184-90. [http://dx.doi.org/10.1016/j.schres.2015.11.025] [PMID: 26678982]
- [6] Subandi MA. Bangkit: the processes of recovery from first episode psychosis in Java. *Cult Med Psychiatry* 2015; 39(4): 597-613. [http://dx.doi.org/10.1007/s11013-015-9427-x] [PMID: 25600832]
- [7] Noiseux S, Ricard N. Recovery as perceived by people with schizophrenia, family members and health professionals: A grounded theory. *Int J Nurs Stud* 2008; 45(8): 1148-62. [http://dx.doi.org/10.1016/j.ijnurstu.2007.07.008] [PMID: 17888440]
- [8] Dukungan Keluarga Berkontribusi Besar bagi Kesembuhan Pasien Skizofrenia 2014 December 3; [https://www.dokterdigital.com/id/news/1572\_dukungan-keluarga-berkontribusi-besar-bagi-kesembuhan-pasien-skizofrenia.html]
- [9] Tyas TH. Indonesia Menuju Bebas Pasung Terhadap Penderita Gangguan Mental 2015 December 3; [http://www.voaindonesia.com/content/indonesiamenuju-bebas-pasung]
- [10] Pahwa R, Bromley E, Brekke B, Gabrielian S, Braslow JT, Brekke JS. Relationship of community integration of persons with severe mental illness and mental health service intensity. *Psychiatr Serv* 2014; 65(6): 822-5. [http://dx.doi.org/10.1176/appi.ps.201300233] [PMID: 24733579]
- [11] Won YL, Solomon PL. Community integration of persons with psychiatric disabilities in supportive independent housing: A conceptual model and methodological considerations. *Ment Health Serv Res* 2002; 4(1): 13-28. [http://dx.doi.org/10.1023/A:1014093008857] [PMID: 12090303]
- [12] Chan KK, Mak WW. The mediating role of self-stigma and unmet needs on the recovery of people with schizophrenia living in the community. *Qual Life Res* 2014; 23(9): 2559-68. [http://dx.doi.org/10.1007/s11136-014-0695-7] [PMID: 24756436]
- [13] Nurjannah I, FitzGerald M, Foster K. Patients' experiences of absconding from a psychiatric setting in Indonesia. *Int J Ment Health Nurs* 2009; 18(5): 326-35. [http://dx.doi.org/10.1111/j.1447-0349.2009.00611.x] [PMID: 19740 142]
- [14] Andresen R, Oades L, Caputi P. The experience of recovery from schizophrenia: Towards an empirically validated stage model. *Aust N Z J Psychiatry* 2003; 37(5): 586-94. [http://dx.doi.org/10.1046/j.1440-1614.2003.01234.x] [PMID: 14511 087]
- [15] Jääskeläinen E, Juola P, Hirvonen N, *et al.* A systematic review and meta-analysis of recovery in schizophrenia. *Schizophr Bull* 2013; 39(6): 1296-306. [http://dx.doi.org/10.1093/schbul/sbs130] [PMID: 23172003]
- [16] Jose D, Ramachandra , Lalitha K, Gandhi S, Desai G, Nagarajaiah . Consumer perspectives on the concept of recovery in schizophrenia: A systematic review. *Asian J Psychiatr* 2015; 14: 13-8. [http://dx.doi.org/10.1016/j.ajp.2015.01.006] [PMID: 25703654]
- [17] Warner R. Recovery from schizophrenia psychiatry and political economy. USA: Brunner-Routledge 2004.
- [18] Ng RM, Pearson V, Lam M, Law CW, Chiu CP, Chen EY. What does recovery from schizophrenia mean? Perceptions of long-term patients. *Int J Soc Psychiatry* 2008; 54(2): 118-30. [http://dx.doi.org/10.1177/0020764007084600] [PMID: 18488406]
- [19] Fontaine K. L. Mental Health Nursing. New Jersey: Pearson Prentice Hall 2009.
- [20] Stuart GW. Principle and practice of psychiatric nursing. Canada: Mosby Elsevier 2013.
- [21] Newell R, Gournay K. Mental health nursing an evidence-based approach. Philadelphia: Churchill Livingstone Elsevier 2009.
- [22] Liberman RP, Kopelowicz A, Ventura J, Gutkind D. Operational criteria and factors related to recovery from schizophrenia. *Int Rev Psychiatry* 2002; 14(4): 256-72. [http://dx.doi.org/10.1080/0954026021000016905] [PMID: 124725626]
- [23] Meesters PD. Late-life schizophrenia: Remission, recovery, resilience. *Am J Geriatr Psychiatry* 2014; 22(5): 423-6. [http://dx.doi.org/10.1016/j.jagp.2014.01.009] [PMID: 24725626]
- [24] Wood L, Birtel M, Alsawy S, Pyle M, Morrison A. Public perceptions of stigma towards people with schizophrenia, depression, and anxiety 2014; 220: 604-8. [http://dx.doi.org/10.1016/j.psychres.2014.07.012]
- [25] Ng RM, Pearson V, Chen EE, Law CW. What does recovery from schizophrenia mean? Perceptions of medical students and trainee psychiatrists. *Int J Soc Psychiatry* 2011; 57(3): 248-62. [http://dx.doi.org/10.1177/0020764009354833] [PMID: 20068021]
- [26] Liberman RP, Kopelowicz A. Recovery from schizophrenia: A concept in search of research. *Psychiatr Serv* 2005; 56(6): 735-42. [http://dx.doi.org/10.1176/appi.ps.56.6.735] [PMID: 15939952]
- [27] Sarwono R, Subandi M. Mereka memanggilkuk 'kenthir'. *Jurnal Psikologi* 2013; 40(1): 1-14. [http://dx.doi.org/10.22146/jpsi.7062]
- [28] Liberman R. Recovery from disability manual of psychiatric rehabilitation. Washington, DC: American Psychiatric Publishing Inc 2008.