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ASSESSING DISABILITY MAGNITUDE USING WHODAS IN SCHIZOPHRENIA PATIENTS IN A REGIONAL MENTAL HEALTH HOSPITAL

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ABSTRACT
Schizophrenia is a chronic mental disorder that significantly contributes to global disability. Schizophrenia patients experience impairments in multiple functional areas such as cognition, mobility, self-care, social interaction, and participation in daily life activities. Evaluating the magnitude of these disabilities is crucial for designing targeted interventions and improving patient outcomes. Objective: This study aims to assess the level of disability in schizophrenia patients using the WHO Disability Assessment Schedule (WHODAS 2.0) at Dr. Arif Zainudin Regional Psychiatric Hospital, Surakarta. Method: A quantitative descriptive study using an observational-analytic approach was conducted with 106 patients with schizophrenia. Data were collected using the WHODAS 2.0 questionnaire, which assesses six functional domains: cognition, mobility, self-care, getting along, life activities, and participation. Data were analyzed using SPSS 26 software. Results: The study found that usual to mild impairment was observed in all domains. Cognitive impairments were seen mainly in problem solving and concentration. Mobility and self-care tasks were manageable, but independence was slightly impaired. Social interaction and community participation were limited by emotional and environmental factors. Conclusions: Patients with schizophrenia exhibit mild disability across multiple domains, particularly in social and emotional aspects, highlighting the need for targeted interventions to improve their functional outcomes.

Keywords: disability magnitude; mental disorder; mental health; schizophrenia; whodas

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INTRODUCTION

The World Health Organization (WHO) definitively states that disability refers to the extent of functional impairment in the physical, social, and environmental aspects that affect everyday activities and social participation. Therefore, disability is the primary indicator of health status. Disability is not just about the consequences of physical limitations caused by disease or injury. It is also about the impact of social and environmental barriers, which can be addressed with the right interventions (Federici et al., 2017; Organization, 2010). Mental Health is the behavior of a person that can be used to indicate or describe their health (Sudirman & Soleman, 2021).Disabilities are a direct result of mental illness. Skizofrenia is a severe mental illness that affects 24 million people worldwide, or 1 in 300 individuals. Those with schizophrenia have a life expectancy 10-20 years shorter than the general population. The disease is characterized by perceptual disturbances and significant behavioral changes. It is the fourth leading cause of disability globally (Charlson et al., 2018; WHO, 2023).

Almost everyone will experience disability at some point in their lives. There are currently an estimated 1.3 billion people—approximately 16% of the global population—who experience significant disabilities. This number is rising rapidly as the population ages and the prevalence of non-communicable diseases increases. Disability arises from the interaction between individuals with specific health conditions, such as cerebral palsy, Down syndrome, and

depression, and personal and environmental factors, including negative attitudes, limited access to transportation and public facilities, and inadequate social support (Charlson et al., 2018; WHO, 2023).

Dr. Arif Zainudin Regional Mental Hospital, Surakarta is one of the healthcare providers that serves the most patients with mental disorders. In 2020, we served 3019 patients, in 2021 2473, and 2023 3785 patients (RSJD Dr.Arif Zainudin, 2023). Disability in schizophrenia is a major public health problem because it is severe, chronic, and disabling Despite pharmacological and psychosocial interventions, schizophrenia remains one of the leading causes of disability, including self-care deficits, inability to perform activities of daily living, social isolation, disinterest in anything, and difficulty working or going to school, resulting in economic burden (Chen et al., 2018; Galderisi et al., 2014; Marcellusi et al., 2018; Taru et al., 2022; Vandenbroucke, 2001). The severity of impairment is an important indicator of functional impairment which is the inability to perform activities of daily living, showing symptoms of mental illness and being affected by it, and the inability to improve quality of life (Abdin et al., 2023; Beyene et al., 2021; Kantrowitz, 2021). The formulation of the problem in this study is how the Evaluation of Disability Magnitude using WHODAS in Schizophrenia Patients in Surakarta City. This study aims to observe and evaluate the magnitude of factors related to disability in schizophrenia patients at RSJD Surakarta.

METHOD

The research design adopts a quantitative descriptive research type, using an observational analytic approach. This study was conducted at Dr. Arif Zainudin Regional Mental Hospital Surakarta in 2024. The targeted population in this study were patients with a diagnosis of schizophrenia, with a total population of 1661 patients. The research sample was 106 respondents through a purposive sampling technique based on the Slovin formula.Data collection was carried out using the WHODAS 2.0 questionnaire consisting of 36 questions to measure the level of disability in schizophrenia patients. The aspects assessed include six domains namely cognition, mobility, self-care, getting along, life activities, and participation, each of which will be scored based on the level of disability categorized as “usual” (1), “mild” (2), “moderate” (3), “severe” (4), and “extreme” (5). Data were analyzed univariately and bivariately using SPSS 26 software.This study focuses on the problem of disability experienced by schizophrenia patients to observe and evaluate the magnitude of disability in schizophrenia patients. The use of the WHODAS 2.0 method is expected to facilitate the design of health interventions and monitor the impact of these interventions through the assessment of six relevant domains: Domain 1: Cognition - includes understanding and communication, Domain 2: Mobility - relates to the ability to move and transfer, Domain 3: Self-Care - includes maintaining hygiene, dressing, eating, and living alone, Domain 4: Getting along - focuses on interactions with others, Domain 5: Life Activities - includes household responsibilities, leisure, work, and education, and Domain 6: Participation - relates to participation in community activities and participation in society.

RESULT

This study has been conducted to observe and evaluate the magnitude of factors associated with disability in schizophrenia patients in Surakarta Mental Hospital so that the results obtained;

Table 1.
Respondent characteristics (n= 106)

Characteristic	f	%
Gender		
Male	61	57,5
Female	45	42,5
Age		
<30 years	29	27
30-35 years	23	22
36-40 years	19	18
41-45 Years	11	10
>45 Years	24	23
Employment Status		
Civil Servant	3	3
Non-Civil Servant	103	97
Education		
Don't School	3	3
Primary school	23	22
Secondary school	77	72
Bachelor	3	3

Table 1. Describes that the majority of respondents (57.5%) were male with most being under 30 years old (27%) and over 45 years old (23%). Most worked as non-civil servants (97%), only 3% were civil servants. In terms of education, 72% of respondents had a secondary school education, 22% had an elementary school education, and only 3% of respondents had a university degree and did not attend school. This shows the dominance of respondents who have a secondary education and work in the non-civil servant sector.

Table 2.
Cognitive Distributive Respondent

Domain	Items	Score	Category	Domain score	Domain Category
Cognitive	Concentrate on doing something for ten minutes?	2,0	Mild	2	Mild
	Remember to do important things?	1,8	Usual		
	Analyze and find solutions to problems in everyday life?	2,0	Mild		
	Learning a new task, for example, learning how to get to a new place?	2,0	Mild		
	In general understanding what people are saying?	1,9	Usual		
	Starting and maintaining a conversation?	2,0	Mild		

Table 2, respondents showed mostly mild cognitive problems in the cognitive domain, particularly in terms of concentrating on doing something for ten minutes, analyzing and finding solutions, and learning new tasks (score 2,0 mild category). Moreover, regarding the ability to remember to do important things and understand what people say, respondents were in the "usual" category (score 1,8-1,9), indicating that their ability in this aspect was not significantly impaired.

Table 3.
Respondent Mobility Domain Distribution

Domain	Items	Score	Category	Domain score	Domain Category
Mobility	Standing for a long time, for example 30 minutes?	1,5	Usual	1,3	Usual
	Standing up from sitting?	1,3	Usual		
	Moving around your home?	1,2	Usual		
	Out of your house?	1,4	Usual		
	Walking a long distance like a kilometer [or equivalent]?	1,4	Usual		

Table 3. In the mobility domain, respondents were generally in the "usual" category for prolonged standing, moving around the house, and walking long distances (score 1.2-1.5). This suggests that respondents can perform daily mobility activities without major difficulties, although there are potential limitations in the long term, especially related to the duration of physical activity.

Table 4.
Domain distribution Respondent self-care

Domain	thing	shoe	golongan	Domain score	Domain Category
Self-Care	Shower or cleanse your whole body?	1,2	Usual	1,2	Usual
	Dress?	1,2	Usual		
	Eat?	1,2	Usual		
	Staying alone for a few days?	1,3	Usual		

Table 4. In the self-care domain, respondents were in the "usual" category for self-care activities such as bathing, dressing, and eating (score 1,2). They were able to carry out basic self-care tasks, indicating no serious difficulties. However, the ability to stay alone for a few days scored slightly higher (1,3), suggesting a slight challenge in terms of independence.

Table 5.
Domain of mingling/gathering with people by respondents

Domain	Items	Score	category	Domain score	Domain Category
Getting along with people	Dealing with people you don't know?	1,8	Usual	1,7	Usual
	Maintaining friendships?	1,8	Usual		
	Hang out with people close to you?	1,8	Usual		
	Looking for new friends?	1,8	Usual		
	Sexual activity?	1,1	Usual		

Table 5. Sociability Domain, Respondents were generally in the "usual" category regarding interacting with strangers, maintaining friendships, and making new friends (score 1.8). Sexual activity scored lower (1.1), indicating no possible problems. Overall, respondents were still able to maintain social relationships relatively well.

Table 6. In the Routine Domain, in activities of daily living, respondents indicated mild challenges, especially in completing household chores and essential tasks (score 1.9-2.0). However, respondents also reported that their health condition affected their work or school performance (score 1.5), which puts them in the "usual" category for some of the more physically demanding tasks.

Table 6.
Domain distribution Respondent routines

Domain	Items	Score	Category	Domain score	Domain Category
Life Activities	Taking care of your household responsibilities?	2,0	Mild	2	Mild
	Doing your most important household chores well?	1,9	Usual		
	Completing all the household chores you need to do?	2,0	Mild		
	Getting your household chores done as quickly as needed?	1,9	Usual		
	What is your daily work/school?	2,0	Mild		
	Are you doing your most important work/schoolwork well?	2,0	Mild		
	Completing all the work you need to do?	2,0	Mild		
	Getting your work done as quickly as it takes?	2,0	Mild		
	Do you have to work at a lower level due to health conditions?	1,5	Usual		
	Do you earn less money as a result of a health condition?	1,5	Usual		

Table 7.
Respondent Participation domain distribution

Domain	Items	Score	Category	Domain score	Domain Category
Participation in society	How much trouble do you have when you join a community activity (e.g., a celebration, religious activity or other activity) in the same way as everyone else?	1,9	Usual	2	Mild
	How much of a problem do you experience because of obstacles or obstacles in your environment?	2,1	Mild		
	How much trouble do you experience in living a dignified life because of other people's attitudes and actions?	1,9	Usual		
	How much time do you spend on your health conditionor its consequences?	2,0	Usual		
	How much are you emotionally affected by your health condition?	2,3	Mild		
	How much is your health draining your or your family's financial resources?	1,6	Usual		
	How much trouble does your family have with your health problems?	1,6	Usual		
	How much trouble do you face in doing things alone for relaxation or pleasure?	1,7	Usual		

Table 7. In the participation domain, respondents experienced normal to mild challenges in community participation, mainly related to environmental barriers and the emotional impact of health conditions (score 1.9 - 2.3). While they can still participate in social and religious

activities, health conditions are a limiting factor in their level of engagement. Emotional barriers and the drain on financial resources due to health conditions are prominent issues (2.3), although the degree of difficulty experienced varies.To address the issue of disability in schizophrenia patients at RSJD Surakarta based on the research results and interpretations provided, here are some innovative and evidence-based strategies that can be implemented;

Tabel 8.
Each domain's Starategis issues

Domains	Issue Starategis
Cognitive	1. Mindfulness and Stress Management Training Using mindfulness techniques to help patients improve their concentration and ability to solve everyday problems. This involves teaching breathing and relaxation techniques to help them focus on specific tasks, such as remembering important tasks or solving simple problems. 2. Simple Cognitive Stimulation, Implementing exercise sessions that involve simple games or activities such as crossword puzzles, memory games, or physical activities that stimulate the brain, to improve the cognitive capacity of patients. It can be done in daily sessions in the ward or clinic.
Mobility	1. Light Physical Exercise Program, Create a daily exercise program that involves light movements, such as short walks within the hospital or ward environment. Focus on exercises that can strengthen the core muscles and assist the patient in maintaining mobility such as standing or walking. 2. Range of Motion Exercises, Simple exercises performed in bed or in the room that involve moving the patient's joints to prevent stiffness and maintain basic mobility. These exercises can be incorporated into the patient's daily routine to improve their ability to move and perform activities.
Self-Care	1. Structured Self-Care Teaching, A training program that focuses on basic skills such as bathing, dressing, and eating. This approach can be done by breaking down activities into small steps and monitoring the patient's progress at regular intervals. 2. Use of Simple Reminders and Scheduling Methods Create a daily schedule posted in their living space or use a reminder system such as a simple alarm set at certain times.
Getting along with people	1. Simple Social Exercises Train patients with simple social interaction scenarios, such as how to start a conversation or get along with others in everyday contexts. Role-playing can be an effective way to practice these social skills. 2. Small Group Sessions, Organize small group conversations, where patients can talk to each other with your guidance as a nurse. This will help them learn and get used to interacting with others more naturally and comfortably.
Life Activities	1. Teaching Time and Task Management Assist the patient by creating a simple daily to-do list and teaching them how to prioritize these tasks. This may include activities such as housekeeping or simple chores in the hospital environment. 2. Support in Daily Activities Providing supervisory assistance, such as monitoring whether the patient can complete daily tasks such as sweeping or cleaning their room, and providing direct advice or guidance when needed.
Participation in society	1. Active Role-Based Activity Therapy Involving patients in small community activities within the hospital, such as helping them take part in simple social tasks (e.g. keeping the common areas of the ward clean), can increase their sense of engagement. 2. Emotion Management Training Training patients to manage the emotional impact of their health condition. This could include stress management training or the use of practical coping techniques to overcome anxiety when interacting with others.

DISCUSSION

This study evaluated disability factors in schizophrenia patients at Surakarta Mental Hospital and found that the majority of respondents were male, under 30 years old, and worked as non-civil servants, with secondary education. In the cognitive domain, respondents experienced mild problems in concentration, problem-solving, and learning new tasks, but their ability to remember and understand conversations remained normal. This study shows that schizophrenia patients are generally quite cooperative and capable of working together, especially after a trusting relationship is established. The study examined six aspects, namely cognition, mobility, self-care, relationships with others, activities of daily living, and participation in the community.In the mobility aspect, they were able to stand, walk, and move around the house without major difficulties. Based on observation, the patient was able to perform daily activities independently, such as attending gymnastics, morning meetings, and group activity therapy. Nevertheless, the patient still needs direction from nurses or other health workers to ensure the activities are carried out correctly.

In terms of self-care, they can perform basic activities such as bathing, dressing, and eating, but face slight challenges when it comes to living alone. The self-care aspect shows that all patients have been trained regularly through individual and group therapy, so they understand what to do during the treatment period. Self-care activities include bathing, brushing teeth, washing hair, cutting nails, changing clothes, grooming for women, shaving mustaches and beards for men, as well as carrying out regular eating, drinking, and toileting activities. In the social domain, they can maintain relationships and socialize with others, although there are slight emotional and environmental barriers. In the aspects of social relationships, daily activities, and community participation, patients were able to establish interactions and socialize despite emotional and environmental barriers that affected their performance in household tasks, work, or learning activities. Participation in community activities was also affected by environmental factors and emotional state, with family support and financial burden being the main concerns.

In daily activities, there are mild difficulties in completing household and work tasks and health impacts on work or study performance. Participation in community activities is influenced by environmental barriers and emotional states, with financial burden and family support being significant concerns. In the cognition aspect, the patient showed the ability to communicate and think realistically, although there were barriers such as low concentration and difficulty remembering. Therefore, the researcher applied focusing techniques repeatedly to help the patient stay focused on listening and answering each question. The therapeutic use of self technique was also used to build trust so patients felt comfortable conveying their problems or complaints.Cognitive impairment is a hallmark of schizophrenia. It significantly affects patients' functional outcomes and quality of life (Menkes et al., 2019; Okasha et al., 2020). Cognitive impairment is a hallmark of schizophrenia. It significantly affects patients' functional outcomes and quality of life (Gaudelus et al., 2016; Zhu et al., 2019). Cognitive impairment is a hallmark of schizophrenia. It significantly affects patients' functional outcomes and quality of life (Barrios et al., 2017; Gaudelus et al., 2016). Therefore, addressing cognitive impairment through targeted interventions, such as cognitive remediation therapy, is essential to improving functional outcomes in people with schizophrenia (Eack, 2012; Mallet et al., 2020).

Evaluation of disability magnitude in patients with schizophrenia is an important aspect in understanding the impact of the disease on an individual's quality of life (Akinsulore et al., 2015; Borah et al., 2022). This is in line with existing literature, which shows that

schizophrenia affects not only the psychological, but also the social and functional aspects of patients. A decreased ability to interact socially and carry out daily activities can worsen patients' quality of life, often leading to social isolation and depression (González et al., 2024; Özdemir & Kavak Budak, 2022). WHODAS effectively captures the multifaceted nature of disability, revealing significant impairments in social, occupational, and self-care domains among schizophrenia patients (Agrawal & Rath, 2021; Paul & Ali, 2023). Therefore, medical personnel need to consider a thorough evaluation of a patient's disability as part of their treatment plan. Age, disease duration, and treatment adherence may contribute to these differences. Previous research has shown that appropriate interventions and social support can help reduce disability rates (Boucquemont et al., 2019). Healthcare providers need to take a more personalized approach to the care of patients with schizophrenia, taking into account individual factors that influence the level of disability (Maietta et al., 2020; Ojagbemi & Gureje, 2020).

By understanding the level of disability experienced by the patient, the team can design interventions that are more effective and appropriate to the patient's needs (Dreyer et al., 2016). If a patient has difficulty communicating, speech therapy or social rehabilitation programs can be initiated to improve communication skills (Kirkby Shaw et al., 2020; Mach et al., 2022). In addition, the results of this assessment can be used to monitor the patient's progress over time so that interventions can be adjusted as the patient's condition changes (Grewe & Ravindra Nayak, 2024). However, discrepancies in results may be due to differences in the versions of the WHODAS used, as some studies used the shorter 12-item version, which may not fully capture the extent of disability compared to the 36-item version (Mayrink et al., 2018; Silveira et al., 2018).

CONCLUSION

Overall, this specific interpretation suggests that schizophrenia patients at RSJD Surakarta have moderate to mild levels of disability in various aspects of life, with more prominent difficulties in social interaction, daily task completion, and community participation. The decline in functioning in the social and emotional domains is more pronounced compared to physical functioning or self-care. Health factors are the aspects that influence the respondents' level of difficulty in various aspects.

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