Correlation Between Positive And Negative Syndrome Scale (PANSS) Scores Of People With Schizophrenia And World Health Organization Quality Of Life (Whoqol-Bref) Score Of Women Care Giver Of People With Schizophrenia At Rsj Prof.Dr. Muhammad Ildrem Medan

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Abstract- **Background**: Most people with schizophrenia experience a decrease in social functioning and this causes distress, not only in patients but also in their caregivers. The consequences of caring for people with mental disorders are associated with burdens reflected in physical and psychological illness. It is estimated that one in four families is involved in responsibility for caring activities around the world. Families of people with mental disorders reported experiencing psychiatric distress, depression, anxiety, psychotic symptoms due to caregiver responsibilities.

Aim: To determine the relationship between symptoms on people with schizophrenia as assessed by PANSS and the quality of life of female caregivers of people with schizophrenia which was assessed using WHOQOL-BREF at RSJ Prof. DR. M. Ildrem Medan.

Method: This study is a numerical correlative analytic study with a cross-sectional study approach, which assesses the correlation between PANSS scores of people with schizophrenia and WHOQOL-BREF scores of women caregivers of people with schizophrenia. With the number of research subjects 113 people with schizophrenia and 113 women caregivers of people with schizophrenia who have been caring for people with schizophrenia for at least 1 year and are willing to join this study. Analysis of statistical tests using the Spearman test.

Results: The results showed that there was a correlation between the total PANSS score with the WHOQOL-BREF score, with the correlation strength of each domain is r = -0,673 for domain I, r = -0,424 for domain II, r = -7,745 for domain III, and r = - 0.584 for domain IV.

Conclusion: The results of the analysis using the Spearman test showed that there was a negative correlation between the total PANSS score of people with schizophrenia and the WHOQOL-BREF score of women caregiver of people with schizophrenia.

Index Terms- Quality of life, caregivers, Schizophrenia, PANSS scores.

I. INTRODUCTION

Past research has concluded that caregivers of people with schizophrenia have a low risk of quality of life (QOL) due to mental health problems and caregiver burden. The rate of caregiver QOL is subjectively similar to that of people with schizophrenia but lower than the general sample population. QOL levels in caregivers are associated with a variety of factors, including patient disease factors and caregiver psychosocial background. Symptom severity, duration of illness, degree of disability, perceived stigma, women in the nuclear family, old age with low socioeconomic status, and recent life crises are said to be associated with lower QOL.[1]

The consequences of caring for a mentally impaired person are associated with the burdens that reflect both physical and psychological illness. Nearly 450 million people worldwide are diagnosed with psychiatric illness in their lifetime. Some of the disorders include schizophrenia and affective disorders. From this it can be estimated that one in four families is involved in caring responsibilities around the world.[2]

In some resource-poor countries, community-based mental health services and effective formal support systems are inadequate to serve the needs of people with schizophrenia. Therefore, the current trend is a reduction in the length of hospitalization and a reduction in the provision of inpatient rooms, this has led to the shift of responsibility for daily care of people with schizophrenia from formal caregivers in mental health service institutions to informal caregivers in the family sphere. The task of providing care for family members who are people with schizophrenia is a huge task, and care giver can be overwhelmed by the demands associated with this task.[3]

Families of people with mental disorders reported experiencing psychiatric distress, depression, anxiety, and psychotic symptoms due to their responsibilities as caregivers. Parenting activities require great sacrifices with regard to relationships with family and friends, social life and leisure

activities. Caregiver not only experienced physical and verbal abuse, visits to doctors and health facilities, but their general health was also affected and made them vulnerable to disease.[2]

Method

This study is a numerical correlative analytical study with a cross-sectional study approach, which assesses the correlation between the Positive and Negative Syndrome Scale (PANSS) score of people with schizophrenia and the World Health Organization Quality of Life (WHOQOL-BREF) score of female caregivers of pe ople with schizophrenia in RSJ. Prof. DR. M. Ildrem Medan, with a large sample size of 113 people. This research was conducted at RSJ Prof. DR. M. Ildrem Medan from September to October 2019. Inclusion criteria for Care Giver are> 18 years old, female, have cared for ODS at least 1 year, live at home with ODS, spend at least 7 hours / week or care for ODS (minimum 1 hour / day), minimum primary school education (6 years) or equivalent and work. Meanwhile, the exclusion criteria for care giver were having a history of mental disorders and other medical illnesses, a history of using alcohol and other substances. While the inclusion criteria for patients were people with schizophrenia, accompanied by a caregiver during treatment and duration of illness> 1 year, and the exclusion criteria were comorbid with other psychiatric disorders.

Measurment

Positive And Negative Syndrome Scale (PANSS)

The Positive and Negative Syndrome Scale (PANSS) is a medical scale used to measure the symptom severity of patients with schizophrenia and was published in 1987.The scale is 30 items, a seven-point ranking instrument adapted from the BPRS (Gorham et al, 1962) and the Psychopathology scale. Of the 30 parameters assessed, seven were selected to form a positive scale (score range 7-49), seven negative scales (7–49), and the

remaining 16 constitute a general psychopathology scale (16–112). The general psychopathology section was included separately but parallel (to positive and negative symptoms) as a measure of the severity of schizophrenia. Each is rated from 1 (absent) to 7 (extreme). In theory, a patient rated "absent" (or 1) on all items would receive a total score of 30, and a patient rated "extreme" (or 7) on all items would receive a total score of 210.[4,5]

World Health Organisation Quality of Life- BREF (WHOQOL-BREF)

The World Health Organization Quality of Life-BREF (WHOQOL-BREF) is a shortened version of the WHOQOL-100, which consists of a 26-item assessment. WHOQOL-BREF has psychometric properties of good to very good reliability, with good performance in the initial validity test. These results indicate that WHOQOL-BREF is an assessment for a valid and cross-cultural QOL which is reflected in its four domains, namely the physical domain, psychological domain, social domain and environmental domain.[6]

The World Health Organization Quality of Life-BREF (WHOQOL-BREF) is used in time-limited situations, where the burden of respondents needs to be minimized such as for epidemiological surveys, and some clinical trials. Questions on WHOQOL-BREF were selected based on their ability to explain substantial proportions.[6]

Statistical Analysis

Data were analyzed based on the SPSS tool to determine differences in the demographic characteristics of the sample. Variables with a categorical scale are presented in frequency and proportion and variables with a numerical scale are presented in the median (minimum-maximum) because the data are not normally distributed (p <0.05).

Table. 1 Demographic Characteristics of Female Caregivers and people with schizophrenia

Variable	n %
Female Caregiver	
Age (Year), median (min-max)	54 (23-63)
Education, median (min-max)	9 (6-16)
Relationship with Patient	
• Parents	74 (65,5)
• Spouse	22 (19,5)
• Sibling	17 (15,0)
Work Status	
• Employee	42 (37,2)
• Unemployed	71 (62,8)
Marital Status	
• Married	62 (54,9)
• Unmarried	51 (45,1)
People with Schizophrenia	
Age (year), median (min-max)	32 (21-53)
Duration of Illness, median (min-max)	5 (2-8)
Salary, median (min-max)	0,5 (0,5- 6)

Table 2. Correlation of patient's PANSS Score and Quality of Life WHOQOL-BREF Score for female caregivers of patients.

WHOQOL-BREF Score	N	Median (Min-Max)	PANSS Score
Domain I	113	69 (25-100)	r = -0.673 p = 0.001
Domain II	113	69 (25-100)	r = - 0.745 p = 0.001
Domain III	113	69 (50-100)	r = - 0.745 p = 0.001
Domain IV	113	81 (31-100)	r = - 0.584 p = 0.001

There is a correlation between the quality of life of domain I caregivers and PANSS. The strength of the relationship between quality of life of domain I caregivers and PANSS of -0.673 indicates a negative correlation with strong correlation strength. And it can also be concluded that there is a correlation between the quality of life of domain II caregivers and PANSS. The strength of the relationship between quality of life of domain II caregivers and PANSS of -0.745 indicates a negative correlation with strong correlation strength (r = 0.6- <0.8). The results of the Spearman correlation test of quality of life for caregivers in domain III and PANSS obtained p value <0.05 and it was concluded that there was a correlation between the quality of life of caregivers in domain III and PANSS. Quality of life for domain IV and PANSS caregivers obtained p value <0.05 and it was concluded that there was a correlation between the quality of life of domain IV and PANSS caregivers. The strength of the relationship between the quality of life of domain IV caregivers and PANSS of -0.584 indicates a negative correlation with moderate correlation strength (r = 0.4- <0.6) .[7]

Discussion

In this study, it can be concluded that there is a correlation between the PANSS ODS score and the WHOQOL-BREF quality of life score among female caregivers. Correlation was found in domains I, II, III, and domain IV. This is in line with research by Panigrahi et al. In 2013 in India, a correlation was found between the total PANSS ODS score and the quality of life score calculated by the Quality of Life Enjoyment and Satisfaction Questionnaire-Short Form (Q-LES-Q-SF) with strength correlation -0.512 with a total sample size of 50 samples.[7] There was a correlation between the total PANSS score. . The strength of the relationship between the physical domain caregiver quality of life and the total PANSS score of -0.13 indicates an equally negative correlation. [8]

Likewise, a study conducted by Adeosun in 2013 found a correlation between caregiver burden as measured by the emotional domain Zarit burden Interview (ZBI) and PANSS score with p <0.001 and r = 0.747. Where the total PANSS score has a positive correlation to caregiver burden with a strong correlation strength. High PANSS scores predict high caregiver burden on multiple domains. People with schizophrenia with worse symptoms may have poorer function limitations, which in turn add a greater level of responsibility to caregivers. Likewise in this study, the high quality of life score of WHOQOL-BREF increases

the ability to care for female caregivers of ODS so that it can improve the PANSS score in the ODS they care for.[3]

Quality of life for caregivers in domain III and total PANSS score obtained p value <0.05 and it was concluded that there was a correlation between quality of life of caregivers in domain III and total PANSS score. The strength of the relationship between the quality of life of domain III caregivers and the total PANSS score of -0.424 indicates a negative correlation with moderate strength (r = 0.4- <0.6). that there is a correlation between the quality of life of the social relationship domain caregiver and the PANSS score with p <0.05. The strength of the relationship between the social relationship domain caregiver quality of life and the PANSS score of -0.17 indicates a negative correlation.[8]

Caregivers are now considered a key component in providing integral services for individuals with schizophrenia and families. For example, Caqueo-Urizar et al. pointed out that the development of family support activities is an important issue, and they cautioned that a mere focus on symptom relief and relapse prevention is not sufficient. There is a need for enhanced family intervention programs that can be provided by health care teams. Significant family factors that should be discussed when planning treatment for individuals with schizophrenia.[8]

Female caregivers had significantly higher load scores in the "emotional strain" and "financial / physical strain" domains. This may reflect the sociocultural expectations placed on women to adopt the role of caregiver whenever a family member falls ill, despite the difficulties in combining the demands of caring with other major sociocultural responsibilities. In African society, female caregivers tend to accept the role of caregivers as their culture and customs, so that the time they sacrifice for the task is considered normal. Thus, it can be considered why the association of higher load scores in the "time / dependence" domain with being a female caregiver.[3]

The strength of this study is that studies with similar measurement methods and instruments have never been conducted in Indonesia. This study has also attempted to control for confounding factors by means of analysis and with restrictions and the results of this study are in line with the results of other studies. While the limitation of this study is that this study was not conducted in a multicenter due to limited resources. In this study, the PANSS score was only assessed on the total PANSS score.

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