

EFFECT OF SOCIAL ECONOMIC FACTORS ON QUALITY OF LIFE: A STRUCTURAL MODEL IN SCHIZOPHRENIA PEOPLE IN BALI PROVINCE-INDONESIA

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Abstract

Health is not only about physical problems that are clearly visible, but also includes mental problems that tend not to be seen clearly. The aims of this study is to analyze the influence of Socio Economic Factors, Assistance, Psychiatric Conditions, Treatment of Social Economic Participation And Quality of Life in people with schizophrenia. By surveying 73 people with schizophrenia in Bali Province, data analysis by Smart PLS-30, it is obtained that Socio Economic Factor affects insignificantly on Treatment, Social Economic Factor affects significantly and directly on Psychiatric Condition, Assistance affects significantly and directly on Psychiatric Condition, Assistance affects significantly and directly on Treatment, Socio Economic Factor affects insignificantly on Social Economic Participation, Socio Economic affects

insignificantly on Quality Of Life, Assistance affects significantly and directly on Quality of Life, Assistance affects significantly and directly on Social Economic Participation, Treatment affects significantly and directly on Social Economic Participation, Psychiatric Conditions affects significantly and directly on Social Economic Participation, Treatment affects insignificantly on Quality of Life, Psychiatric Conditions affects significantly and directly on Quality of Life, Treatment not being mediated, Social Economic Factors affect to Social Economic Participation, By being mediated by Psychiatric Conditions, Social Economic Factors affect to Social Economic Participation, Treatment not being mediated Social Economic Factors affect to Quality of Life, By being mediated by Psychiatric Condition, Social Economic Factors affect to Quality of Life, By being mediated by Medication, Assistance affect to Social Economic Participation, By being mediated by Psychiatric Conditions, Assistance affect to Social Economic Participation, By being mediated by Psychiatric Conditions, Assistance affect to Quality of Life, Treatment not being mediated Assistance affect to Quality of Life.

Keywords: Social economic factors, assistance, psychiatric conditions, treatment, social economic participation, quality of life, schizophrenia

INTRODUCTION

Health development is one of the national development efforts that is held in all areas of life. It aims to increase awareness, willingness and ability to live healthy for every person to realize the optimal health status of society. Health development is one of the main efforts to improve the quality of human resources which in turn supports the acceleration of achievement of national development targets. Health is generally the main goal and is the result of a health development. One of the economic disciplines that studies health efforts and the factors that affect health to achieve optimal health degree is the health economy (Lubis, 2009).

People with schizophrenia are people who experience *splitting of mental or personality* (Hawari, 2003). Symptoms include many functions such as perceptual disorders (hallucinations), false beliefs (dellucions), decreases in thought and speech (alogia), impaired motor activity (catatonia), disturbance of emotional expression (dull affects), incapable of feeling pleasure (anhedonia). In the course of the sufferers will experience deterioration from the level of previous functions both social functions, work and selfcare. Patients are difficult to socialize and can not work as before, because of the regressive and setbacks in selfcare (Maslim, 2003).

Schizophrenia is the most common disorder compared with other mental disorders. Data from the Ministry of Health Indonesian in 2013, the number of people with mental disorders in

Indonesia reached more than 28 million people, with the category of mild mental disorders 11.6 percent of the population and 0.46 percent suffered from severe mental disorders(Anna, 2010). Medical record data of Mental Hospital of Bali Province shows the number of patient visits with mental disorders each year continues to increase (Table 1).

Table 1. Number of Patients Mental Disorders at Mental Hospital of Bali Province Year 2008-2014

Years	Outpatient (people)	Inpatient (people)	Total (people)	Change
2008	7.087	4.451	11.538	
2009	7.989	4.640	12.629	1.091
2010	8.291	4.920	13.211	582
2011	15.943	5.234	21.177	7.966
2012	19.923	5.060	24.983	3.806
2013	23.779	5.164	28.943	3.960
2014	26.782	5.664	32.446	3.503

Source: Bali Province Mental Hospital 2015

Schizophrenia without treatment and assistance by the family can not do the job maximally, or even have to lose their jobs, thus potentially losing income and experiencing impaired social function. This decline in social and economic participation is attributed to the course of the disease itself, the symptoms of the remaining disease, the support of the social environment as well as the treatment. This will have an impact on the quality of life of schizophrenics.

Based on the complexity of schizophrenic problems, researchers are interested in researching the affects of social economic factors, assistance, treatment and psychiatric conditions on social economic participation and quality of life in people with schizophrenia in Bali Province.

RESEARCH METHODOLOGY

Quantitative approach was applied in this study to answer the research goals with variance based structural equation modelling (PLS-SEM) were used to analyzed the data and make research inferences. The data were collected from schizophrenia patient and family from nine regencies of Bali Provinces at Bali Province Mental Hospital.

Population and Sample

The exact number of people with schizophrenia in Bali Province is not known for certain. Data from Bali Province Mental Hospital, the number of schizophrenia visit in 2014 reached 32,446

cases. But the number of patients who regularly control or condition is relatively stable about 277 people (Bali Province Mental Hospital, 2015). The sampling technique is using proportional random sampling. The number of sample by using Slovin's criteria by the error level of 10% is obtained 73 people as the respondents. Data were collected on November-December 2016.

Research Variables

The variables in this study include: social economic factor as 1st exogenous variable (X_1), assistance as 2nd exogenous variable (X_2), treatment as 1st endogenous variable (X_3), psychiatric conditions as 2nd endogenous variable (X_4), social economic participation as 3rd endogenous variable (Y_1), quality of life as 4th endogenous variable (Y_2).

Data Collection Method

In this study, the data is collected using questionnaires which have been tested the validity and reliability. The questionnaires are given to 73 people with schizophrenia to reveal their perceptions on the effects of social economic factor, assistance treatment, psychiatric conditions, social economic participation and quality of life people with schizophrenia in Bali province. But if the respondent's answer is doubtful then it will be validated to their family.

Data Analysis Approach

Basically, there are two techniques available to analyze structural equation model, i.e. covariance-based and variance-based structural equation modelling (SEM). Both techniques have their own limitations (Henseler, 2007; Hair, Sarstedt, Ringle, & Mena, 2012). This work applied the variance-based PLS-SEM. The application of PLS-SEM in this research involves these steps: (1) designing the outer or measurement model, (2) designing the inner or structural model, (3) constructing path diagram at outer and inner model, (4) converting path diagram on the inner and outer equation system respectively, (5) the parameter estimation on outer and inner model, (6) measuring the Godness of Fit (GoF), and (7) testing the hypotheses of the study.

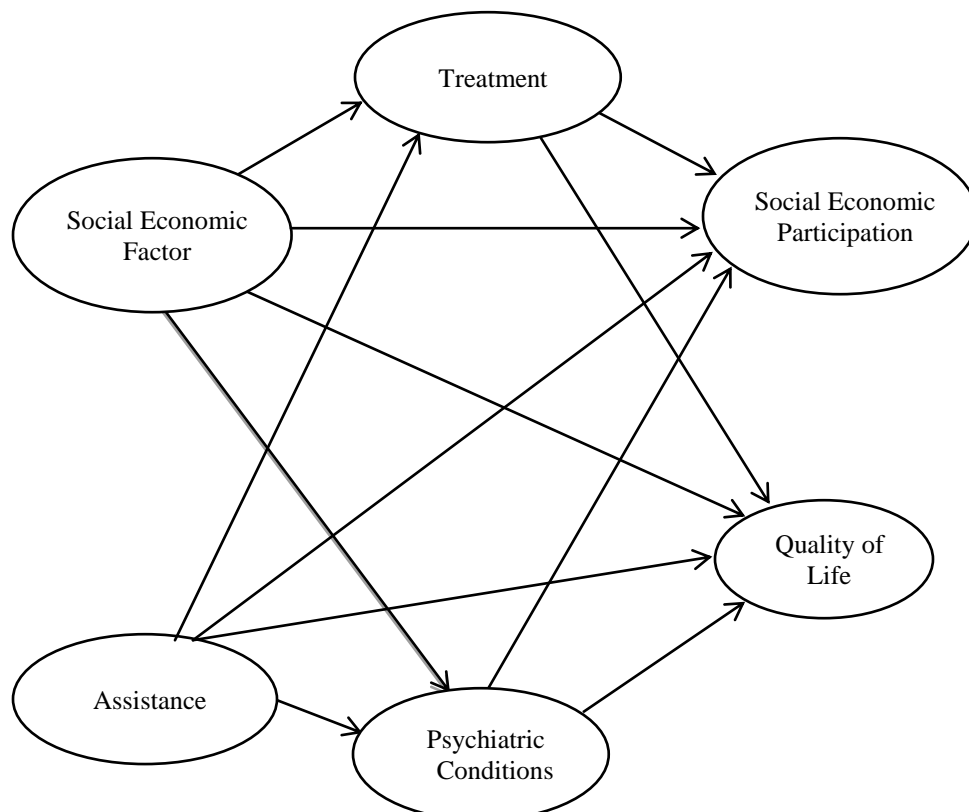
Proposed Research Model and Hypothesis

In accordance with aims of this work, a structural model was developed as shown in Fig.1. Hypotheses were built regarding aim of this work, i.e.:

1. Socio economic factor positively and significantly affects on treatment.
2. Socio economic factor positively and significantly affects on psychiatric conditions.
3. Assistance positively and significantly affects on psychiatric conditions.

4. Assistance positively and significantly affects on treatment.
5. Socio economic factor positively and significantly affects on social economic participation.
6. Socio economic factor positively and significantly affects on quality of life.
7. Assistance positively and significantly affects on social economic participation.
8. Assistance positively and significantly affects on quality of life.
9. Treatment positively and significantly affects on social economic participation.
10. Psychiatric conditions positively and significantly affects on social economic participation.
11. Treatment positively and significantly affects on quality of life.
12. Psychiatric conditions positively and significantly affects on quality of life.
13. Socio economic factor indirectly affects on social economic participation through treatment.
14. Socio economic factor indirectly affects on social economic participation through psychiatric conditions.
15. Assistance indirectly affects on social economic participation through treatment.
16. Assistance indirectly affects on social economic participation through psychiatric conditions.
17. Socio economic factor indirectly affects on quality of life through treatment.
18. Socio economic factor indirectly affects on quality of life through psychiatric conditions.
19. Assistance indirectly affects on quality of life through treatment.
20. Assistance indirectly affects on quality of life through psychiatric conditions.

Figure 1. Conceptual Research Model



ANALYSIS AND RESULTS

Validity and Reliability Test

Validity test in this study is processing by using program SPSS, item is valid when $r > 0.30$ (Sugiono, 2011). An item is declared valid if its correlation value with the other item on the same construct is greater than 0.30. Reliability test in this study is found that all item is reliable by composite reliability (CR) > 0.07 .

Outer Model Analysis

Evaluation of measurement model or outer model is done in several ways, i.e: 1) Convergent Validity (CV) on the reflective indicators that is by looking at the loading factor between measured variables with latent variables or Average Variance Extracted (AVE). A tolerated value of at least 0.50 is considered sufficient (Chin, 1998) 2) Discriminant Validity (DV) on the reflective indicators that is by looking at cross loading of the construct or latent. A good DV is an indicator of having more cross loading on its construct than against another construct. 3) Composite Reliability (CR) is generally used for reflective indicators aimed at measuring the internal consistency of a construct, in addition to the frequently used Cronbach Alpha. Refers to these threshold values, we concluded all of reflective constructs in our model had satisfied internal consistency as well as achieved convergent and discriminant validity.

Table 2. The Reflective Measurement Model Analysis Result

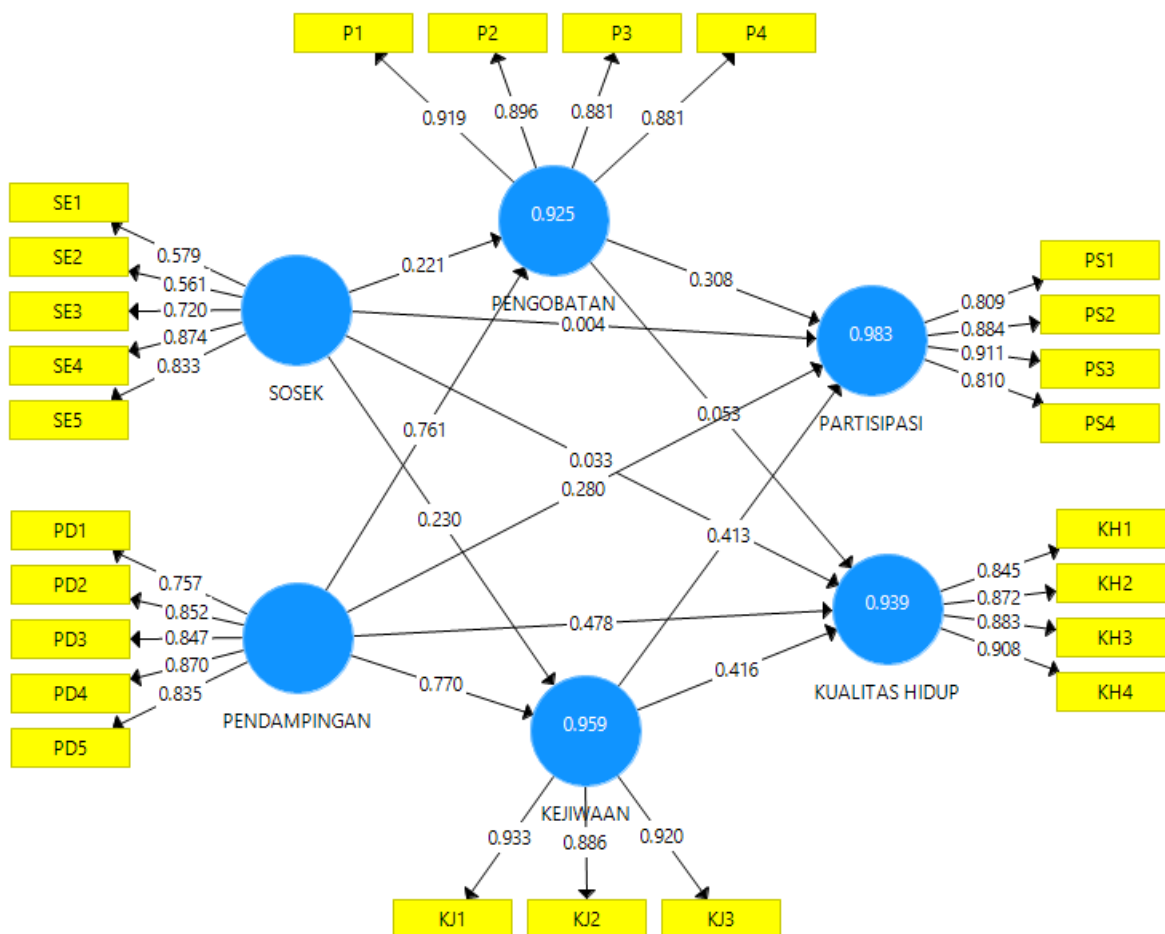
Construct	Indicator Code	Outer Loading	AVE	CR	P value
Social Economic Factor	SE1	0.579	0.525	0.843	0.000
	SE2	0.561			0.000
	SE3	0.720			0.000
	SE4	0.874			0.000
	SE5	0.833			0.000
Assistance	AS1	0.757	0.694	0.919	0.000
	AS2	0.852			0.000
	AS3	0.847			0.000
	AS4	0.870			0.000
	AS5	0.835			0.000
Treatment	TM1	0.919	0.800	0.941	0.000
	TM2	0.896			0.000
	TM3	0.881			0.000
	TM4	0.881			0.000

Table 2...

Psychiatric Conditions	PC1	0.933	0.834	0.938	0.000
	PC2	0.886			0.000
	PC3	0.920			0.000
Social	SEP1	0.809	0.730	0.915	0.000
Economic	SEP2	0.884			0.000
Participation	SEP3	0.911			0.000
	SEP4	0.810			0.000
Quality of Life	QL1	0.845	0.770	0.930	0.000
	QL2	0.872			0.000
	QL3	0.883			0.000
	QL4	0.908			0.000

The final structural equation model with the estimates that is analyzed by PLS-SEM technique is shown in Fig. 2.

Figure 2. Full Model of Research



Inner Model Analysis

The evaluation of the inner model is by looking at the magnitude of its structural path coefficient as well as its statistical t test value obtained by the bootstrapping method. Besides, it is also noted that R^2 for latent variable is dependent. The value of R^2 about 0.67 is said to be good, 0.33 is said to be moderate and 0.19 is said to be weak (Chin, 1998). Table 3 shows the R-square value for each endogenous variable.

Table 3. The R-square Endogenous Variable

Variable	R-square	Explanation
Psychiatric conditions	0.959	Strong
Quality of Life	0.939	Strong
Social Economic Participation	0.983	Strong
Treatment	0.925	Strong

The calculation result of Q^2 is 0.999 so it can be said to have high predictive prevalence, so that the resulting model is feasible to be used to predict. This value shows the variation of Socio-Economic Participation and Quality of Life for 99.9 percent able to be explained by variations of variables Social Economics, Assistance, Psychiatric Conditions and Treatment.

Direct and Indirect Analysis

To know the role of mediation variable on the influence of independent variable to the dependent variable on structural equation model (SEM) as in PLS used McKinnon approach which is a modification of Sobel technique. Smart PLS automatically outputs the indirect effect, so that easy intervening test results can be obtained (Ghozalidan Latan, 2015).

Table 4. Path Coefficient/ Direct Analysis

Construct	Original Sample (O)	T Statistic (O/STDEV)	P Values	Explanation
PC → QL	0,416	2,880	0,004	Sig.
PC → SEP	0,413	4,420	0,000	Sig.
AS → PC	0,770	15,213	0,000	Sig.
AS → QL	0,478	2,042	0,042	Sig.
AS → SEP	0,280	2,415	0,016	Sig.
AS → TM	0,761	5,959	0,000	Sig.
TM → QL	0,053	0,280	0,780	Not.Sig.
TM → SEP	0,308	4,065	0,000	Sig.

SE→ PC	0,230	4,151	0,000	Sig.	Table 4...
SE→QL	0,033	0,335	0,738	Not.sig.	
SE→ SEP	0,004	0,115	0,909	Not.Sig.	
SE→ TM	0,221	1,649	0,100	Not.Sig.	

Table 5. Indirect Analysis

Construct	Original Sample (O)	T Statistic (O/STDEV)	P Values	Explanation
AS→ QL	0,361	2,056	0,040	Sig.
AS→ SEP	0,552	6,703	0,000	Sig.
SE→QL	0,107	2,004	0,046	Sig
SE→ SEP	0,163	2,347	0,019	Sig.

Hypothesis Test

The hypothesis test results are the answers of the questions in this study. This study will prove the inter-variable relationship based on the study concept, namely : 1) directly, the Socio Economic Factor affects positively and insignificantly on the Treatment, 2) directly, the Social Economic Factor affects positively and significantly on the Psychiatric Condition, 3) directly, the Assistance affects positively and significantly on the Psychiatric Condition, 4) directly, the Assistance affects positively and significantly and directly on the Treatment, 5) directly, the Socio Economic Factor affects positively and insignificantly on the Social Economic Participation, 6) directly, the Socio Economic affects positively and insignificantly on Quality Of Life, 7) directly, the Assistance affects positively and significantly on the Quality of Life, 8) directly, the Assistance affects positively and significantly on the Social Economic Participation, 9) directly, the Treatment affects positively and significantly on the Social Economic Participation, 10) directly, the Psychiatric Conditions affects positively and significantly on the Social Economic Participation, 11) directly, the Treatment affects positively and insignificantly on the Quality of Life, 12) directly, the Psychiatric Conditions affects positively and significantly and directly on the Quality of Life, 13) Treatment not being mediated Social Economic Factors affect to Social Economic Participation, 14) By being mediated by Psychiatric Conditions, Social Economic Factors affect to Social Economic Participation, 15) Treatment not being mediated Social Economic Factors affect to Quality of Life, 16) By being mediated by Psychiatric Condition, Social Economic Factors affect to Quality of Life, 17) By being mediated by Medication, Assistance affect to Social Economic Participation, 18) By being mediated by Psychiatric Conditions, Assistance affect to Social Economic Participation, 19) By being

mediated by Psychiatric Conditions, Assistance affect to Quality of Life, 20) Treatment not being mediated Assistance affect to Quality of Life.

DISCUSSION

The findings show that the social economic factors significant increases on psychiatric conditions. These findings indicate that with increasing socioeconomic status will improve psychiatric conditions in people with mental disorders (schizophrenia) in Bali Province. People with mental disorders whose psychotic symptoms are already controlled can still work, although some of them have limitations in the choice of work that suits their condition. Those who are already able to work this often have difficulty when they want to get a job. Working to be independent is one process that can accelerate the adaptation process of the patient. Of all respondents, about 35% have permanent jobs, ie as civil servants, private, traders, craftsmen and workers. But those who do not have a job can still be productive that is helping the work at home, as housewives, rice fields, raising and making offerings for sale.

Based on the result of indirect correlation analysis, the latent construct of Psychological Condition in this research model is able to mediate on the influence of latent social economic factor to social and economic participation. People with mental disorders whose psychotic symptoms are already controlled can still work, although some of them have limitations in the choice of work that suits their condition. Those who are already able to work this often have difficulty when they want to get a job. Though working to be independent is one process that can accelerate the process of adaptation of patients.

The Psychiatric Condition is able to fully influence (mediate) the social economic factor to quality of life. Increased social economic conditions in people with schizophrenia will not automatically improve the quality of life. Given that the subject of research is a schizophrenia whose condition is strongly influenced by psychological conditions. So the psychological conditions that will mediate social economic influence on the quality of life of people with schizophrenia.

CONCLUSION

1. Socio Economic Factor directly and insignificantly affects on the Treatment at people with schizophrenia in Bali Province.
2. Social Economic Factor directly and significantly affects on the Psychiatric Condition at people with schizophrenia in Bali Province.
3. Assistance directly and significantly affects on the Psychiatric Condition at people with schizophrenia in Bali Province.

4. Assistance directly and significantly affects on the Treatment at people with schizophrenia in Bali Province.
5. Socio Economic Factor directly and insignificantly affects on the Social Economic Participation at people with schizophrenia in Bali Province.
6. Socio Economic directly and significantly affects on Quality Of Life at people with schizophrenia in Bali Province.
7. Assistance directly and significantly affects on the Quality of Life at people with schizophrenia in Bali Province.
8. Assistance directly and significantly affects on the Social Economic Participation at people with schizophrenia in Bali Province.
9. Treatment directly and significantly affects on the Social Economic Participation at people with schizophrenia in Bali Province.
10. Psychiatric Conditions directly and significantly affects on the Social Economic Participation at people with schizophrenia in Bali Province.
11. Treatment directly and significantly affects on the Quality of Life at people with schizophrenia in Bali Province.
12. Psychiatric Conditions directly and significantly affects on the Quality of Life at people with schizophrenia in Bali Province.
13. Treatment not being mediated Social Economic Factors affect to Social Economic Participation at people with schizophrenia in Bali Province.
14. By being mediated by Psychiatric Conditions, Social Economic Factors affect to Social Economic Participation at people with schizophrenia in Bali Province.
15. Treatment not being mediated Social Economic Factors affect to Quality of Life at people with schizophrenia in Bali Province.
16. By being mediated by Psychiatric Condition, Social Economic Factors affect to Quality of Life at people with schizophrenia in Bali Province.
17. By being mediated by Medication, Assistance affect to Social Economic Participation at people with schizophrenia in Bali Province.
18. By being mediated by Psychiatric Conditions, Assistance affect to Social Economic Participation at people with schizophrenia in Bali Province.
19. By being mediated by Psychiatric Conditions, Assistance affect to Quality of Life at people with schizophrenia in Bali Province.
20. Treatment not being mediated Assistance affect to Quality of Life at people with schizophrenia in Bali Province.

LIMITATIONS

1. One of the limitations of this study, is the sample of research used is people with schizophrenia. When interviewed, sometimes patients feel bored and not focused in answering questions. So the researchers do is to provide time to rest patients and perform data validation with the family.
2. This study was conducted in a relatively short time, using cross-sectional data. This limitation will have an impact on the generalization of research results, assuming that social problems in people with schizophrenia in the province of Bali is very complex. The implication, if the research model is applied at different times and conditions, then it is likely to get different results.

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