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Determinants of Caregiver Behaviour to the Quality of Life among Psychiatric Patients after Removal of Shackles in Klaten and Sukoharjo

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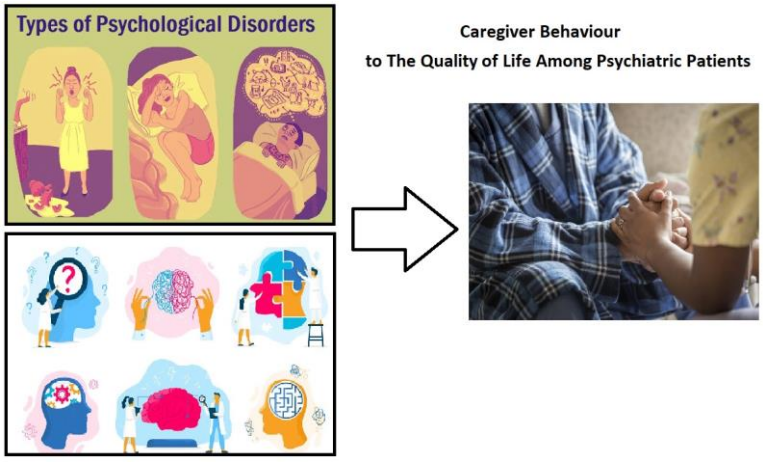
ABSTRACT

Caregiver's behaviour in caring for family members with mental disorders highly influenced the life quality of post-shackle psychiatric patients. This study aimed at determining the determinants of behaviour in the caregiver that affect the life quality of post-shackle patients. The study was conducted using an analytical survey with a cross-sectional study approach. Samples were taken from a population of 63 post-shackle patients and their caregivers in Klaten and Sukoharjo. All seven determinants of caregiver behaviour were analysed by concurrent regression. The independent variables were knowledge, attitudes, behavioural tendencies, subjective norms, self-efficacy, intentions, and social support from the family, while the dependent variable was the life quality of post-stock patients. Data analysis included multiple regression analysis test, t-test, F-test, and R2. The regression test revealed F obtained of 9.624 with a significance value of 0.001 (ρ <0.05) so that H0 was rejected. The determination value was 0.493. Hence, the independent variable in the model could explain 49.3% of variations of changes in the dependent variable. The study concluded that caregiver behaviour, namely the factors of knowledge, attitude, self-efficacy, and caregiver intention, partially determined the quality of life of post-shackle patients in Klaten and Sukoharjo districts.

GRAPHICAL ABSTRACT



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Introduction

Psychiatric drugs alter the hormones in the brain that control feelings and patterns of thought. When paired with psychotherapy, they are typically more effective. Medicines may alleviate complications in some cases, but alternative methods of a recovery plan could be more successful. For example, a drug may relieve depression symptoms such as loss of motivation and lack of attention, encouraging a person to participate more in talk therapy. It may be difficult, though, to determine who will respond to what drug, since different drugs can function differently from one person to another. Health notes are typically checked by physicians to see whether there is reason to support one medication or another. Mental health can be defined as an approach according to mental health criteria that refer to norms or conditions accepted by the society [1,2]. The culture of each community influences the value of their beliefs to influence the definition of health and sickness. Law Number 18 the Year 2014 [3] concerning Mental Health in Chapter 1 Article 1 states that mental health is a condition of an individual who can develop physically, mentally, spiritually, and socially that leads the individual to realize his ability, can overcome pressure and work productively, and to contribute in the community [4,5].

Shackling poses significant health and social problems for the patient with a mental disorder in Indonesia especially in rural areas where help is scarce [6–9]. Shackling in Indonesia is a person who is chained on the feet or both hands and feet, feet plugged into the hole and in isolation/confined. The results of basic health research 2018 show that the case of subjecting mental disorder patients in the shackles in Indonesia is 14%. Such practices usually occur in urban areas with a percentage of 10.7%, and rural areas of 14% [10–12].

Mentally-disordered patients put in shackles in Indonesia are between 18,000 – 20,000 people [13,14]. This figure could be an iceberg phenomenon in which the real case that occurs is certainly more than what is reported.

According to Mental Health Law Number 18 Year 2014, putting someone in shackles is a violation of legal and human rights. Yet, large numbers of households with family members experiencing severe mental disorders are put in the shackles. The risk of human rights violations increases in vulnerable people, such as people with mental disorders [15].

Research on the use of shackles shows that the shackles are used as the last alternative after treatments in mental hospitals several times [16–19]. Reasons for caregivers who shackled patients include: 1) the patients, but without improvement and suffering from regression after admission, 2) poor patient management in the mental hospital, 3) the family's inability to handle and finance the treatment, 4) difficulty in supervising the patient due to the distance between the mental hospital and residence, and 5) following advice from a shaman who usually believes mental disorders are caused by supernatural forces [18].

Minimum services standard of mental health have not been administered accordingly based on community expectations. The community expects that mental health services be carried out at the nearest health center [9]. Pressure from the community is also one of the reasons the family agrees to put patients in shackles. Several studies have shown that community involvement has proven to be more effective in treating the mental disorders person [20]. Improved community mental health care also proves to be superior to hospital care [21].

Several studies have adopted various models of behaviour change either to see the effectiveness of the model or to get the predictors that play an important role in the desired behaviour change. Often an integrated model that combines several models of behaviour change with various predictors, rather than one model of behaviour change, is used as a reference to identify and modify behaviour. The Theory of Reasoned Action (TRA) and Theory of Planned Behaviour

(TPB) models in predicting the determinants of family behaviour that affect the life quality of post-shackles patients were used in this study.

The TRA from [22] is a form of the socio-psychological model. TRA is about the relationship between beliefs, behavioural and normative, attitudes, intentions, and behaviour. The reasons for someone carrying out the behaviour are made for normative beliefs and behaviour. According to TPB theory, the most important determinant of one's behaviour is the intention to behave. The intention to express a behaviour is a combination of attitudes to express behaviour and subjective norms. TPB is based on the assumption that humans are rational beings who use information systematically. People think about the implications of their actions before deciding whether or not to engage in certain behaviours.

Objective

There are seven behavioural factors in the TRA and TPB models including knowledge, attitudes, behavioural tendencies, self-efficacy, subjective norms, intentions, and social support from family or caregivers that affect the life quality of post-shackled patients. The main objective of this study was to analyze the caregiver determinants that affect the quality of life of patients after the release of shackles using the TRA and TPB models.

Material and methods

Based on a preliminary study conducted on 5 families in Sukoharjo in May 2018, the shackling of mental disorder patients was because of aggressive behaviour and advice of community leader and the village head. The interview results showed that the three post-shackle patients experienced recurrence after being discharged from the hospital.

The measuring of quality of life in schizophrenic patients is through a variety of instruments. One of them is Schizophrenia Quality of Life Scale (SQLS). This instrument was developed in clinical applications as an instrument [23] that is acceptable and practical in measuring the quality of life of schizophrenic patients. This instrument is divided into 30 items, which are grouped into three scales: 1) psychosocial, 2) motivation and energy, and 3) symptoms from side effects.

The caregiver behaviour is very influential on the quality of life in post-shackled patients. Construction of instrument to measure caregiver behaviour was done based on theoretical approach of TRA and TPB with the consultation of two psychiatric experts and one community psychiatrist and psychiatrist specialist. The selection of experts is based on their specialty in psychiatry and community mental health. The following behaviours are chosen to be studied to provide insight on dominant behavioural factors: 1) knowledge, 2) attitudes, 3) behavioural tendencies, 4) self-efficacy, 5) subjective norms, 6) intentions, and 7) social support from family or caregivers.

The questionnaire constructed was tested by the mentioned experts based on experience in the field. Furthermore, the validity test (validity) of this research was conducted by using SPSS software, which resulted in a significance level of 5%. The Bi-serial point correlation technique (point bi-serial correlation) was used as a knowledge measuring instruments. The measuring instruments of quality of life, attitudes, behavioural tendencies, self-efficacy, intentions, subjective norms, and social support in the form of Likert' scale using Pearson correlation are used. According to a study [24], a validity coefficient of less than 0.30 is usually considered unsatisfactory based on the assumption of the distribution of scores from a large group of subjects.

Total subject caregiver and post-shackled patients were 63 subjects, 32 from Sukoharjo regency and 31 from Klaten regency. Sampling was done using purposive sampling techniques. The patients' inclusion criteria were recorded by the mental health hospital as a post-shackled patient, lives with family and mental disorder was well controlled in three preceding months.

The research design used was an analytical survey with a cross-sectional study approach.

The independent variables were knowledge, attitudes, behavioural tendencies, subjective norms, self-efficacy, intentions, and social support from the family, while the dependent variable was the life quality of post-shackled patients. Data analysis included t-test, F-test, and R-square test.

Result and Dissection

Characteristics of Respondents

The characteristics of 63 post-shackling patient respondents were measured by using the SQLS. The instruments were assigned to the patients whose answers were helped and verified by the caregivers. The characteristics of post-shackled patients are shown in Table 1.

Table 1: Characteristics of Post-Shackled Patients

No	Characteristics		N= 63	%
1.	Sex	a. Male	33	52
		b. Female	30	48
2.	Age	c. 20-40 years	42	67
		d. 41-65 years	18	28
		e. > 65 years	3	4
3.	Education	a. No education	6	10
		b. Elementary School	25	40
		c. Junior High School	16	25
		d. Senior High School	16	25
4.	Duration of illness	a. 1-5 years	5	8
		b. 5 – 10 years	20	32
		b. 10 – 15 years	12	19
		d. 15 – 20 years	16	25
		e. > 20 years	10	16
5.	Duration of shackle	a. 0-1 years	2	3
		b. 1-3 years	23	36.5
		c. 3-5 years	23	36.5
		d. > 5 years	15	24

Table 2: Caregiver characteristics of Post-shackle Patients

No	Characteristics		N= 63	%
1.	Sex	a. Male	23	36
		b. Female	40	64
2.	Age	a. 20 – 40 years	17	27
		b. 41 – 65 years	41	65
		c. > 65 years	5	8
3.	Education	a. No Education	4	6
		b. Not completed Elementary School		
		c. Elementary School	1	2
		d. Junior High School	11	17
		e. Senior High School	14	22
		f. Diploma	30	48
			3	5
4.	Occupation	a. Housewife	31	49
		b. Private employee	17	27
		c. Farming	5	8
		d. Trading	4	6
		e. Village officials	3	5
		f. Labourer	3	5
5.	Relationship with patient	a. Parents	27	43
		b. Child	7	11
		c. Older brother or sister /younger brother or sister		
		d. Husband / Wife	26	41
		d. Relative	1	2
			2	3

Based on the characteristics, most respondents have suffered mental disorder of more than 5 years, which supports the theory that the longer a person is ill, the more the quality of life will decrease. The majority of the respondents have experience shackling for more than one year, which correlates to illness length. The characteristics of the 63 family respondents/caregivers of post-shackled patients is shown in Table 2. The instruments regarding knowledge, attitudes, behavioural tendencies, subjective norms, self-efficacy, intentions, and social support were applied for 63 families of post-shackled patients.

The sex characteristics of post-shackle patients' caregivers show that the majority of respondents were female. Regarding the age of the caregivers, the majority were between 41-65 years old, with most caregivers being parents or siblings of the patients.

As for the education level of caregivers, the majority of respondents had at least Junior High School Level, minimum 9 years of education and above, for the education background is 75%. The education level of respondents has supported receiving information from health education to their knowledge about preventing recurrence and shackles of mental disorder patients.

Result of regression analysis

The response of the caregivers to the instruments were recorded and tested to determine the effect of caregiver characteristics on the quality of life of the post-shackled patients. Partial model T-test was used for the analysis of the effect of each independent variable on the dependent variable. Regression analysis produces a regression equation that will be used to find out how much the variables x, i.e., knowledge, attitudes, behaviour, subjective norm, self-efficacy, intentions, and social support caregivers, influence the variable y, i.e., the quality of life of post-shackled patients. The summary of the analysis regression test is shown in Table 3.

Table 3: Result of regression test

Dependent Variables	Regression Coefficient	$T_{obtained}$	t_{tabel}	Sig	test decision
Constant	-30.552	-1.886			
Knowledge	0.891	2.028	1.960	0.043	**H_0 is rejected**
Attitude	0.447	2.308	1.960	0.025	**H_0 is rejected**
Behaviour	0.035	0.151	1.960	0.880	H_0 is accepted
Subjective Norm	0.078	0.529	1.960	0.899	H_0 is accepted
Self-efficacy	0.318	2.616	1.960	0.011	**H_0 is rejected**
Intention	0.365	2.035	1.960	0.047	**H_0 is rejected**
Social support	0.024	0.139	1.960	0.890	H_0 is accepted
$F_{obtained}$	= 9.624				
Sig	= 0.000				
Decision	= H_0 is rejected				
R	= 0.742				
Ajd R^2	= 0.493				

$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4 + b_5X_5 + b_6X_6 + b_7 + e$

Y = Quality of life

X_1 = knowledge

X_2 = attitude

X_3 = behaviour

X_4 = subjective norm

X_5 = self-efficacy

X_6 = intention

X_7 = social support

b_0 = constant

$b_1, b_2, b_3, b_4, b_5, b_6, b_7$ = Regression coefficient

Regression Equation

In this equation formula, only the significant variables are included

Quality of life = – 30.552 + 0.891know + 0.447 att. + 0.035 beh. + 0,078 subj norm + 0.318 self. eff. + 0.365 int + 0.024 Soc. Sup.

The value of the regression constant was -30.552, meaning that if seven independent variables were constant (= 0) then the quality of life of patients was -30.552. Table 1 shows partially significant test results that knowledge, attitudes, self-efficacy, and intentions variables of the family had a positive and significant effect on the life quality of post-shackle patients while behaviour, subjective norms, and family social support variables partially did not have a positive and significant effect on the life quality of post-shackle patients.

T-test showed that the variables of family knowledge, attitude, self-efficacy and intention were determinants of the quality of life of post-shackling patients (ρvalue = <0.05) and had a positive and significant effect.

Regression analysis shows the determination coefficient (R-squared) of 0.493. This value shows the influence of knowledge, attitudes, behavior, subjective norms, self-efficacy, intention, and social support of caregivers on the quality of life of post-shackling patients by 49.3%, and the remaining 50.7% is explained by other factors outside of this regression model, as the moderate variable, that were not examined in this study.

The F test shows that statistically, there is a significant influence on the predictors of knowledge, attitude, self-efficacy, and caregiver intentions on the quality of life of post-shackling patients simultaneously. F value> F table (ρ - value <0.05) (see Table 4.)

Table 4: F-test result

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	4807.218	7	686.745	9.624	0.000
Residual	3924.782	55	71.360	-	-
Total	8732.000	62	-	-	-

The analysis results revealed $F_{obtained} > t_{table}$ = 9.624> 7.55. This means that knowledge, attitudes, behavioural tendencies, subjective norms, self-efficacy, intentions, and social support from the family variables significantly influenced the dependent variable, which was the life quality of post-shackle patients (ρ-value <0.001).

Shackling still poses significant health and social problems for the patient with a mental disorder in Indonesia, especially in rural areas where help is scarce. The results of this study based on subjects in a rural area has managed to identify important caregiver characteristics based on the theoretical approach of TRA and TPB instrument, i.e. knowledge, attitudes, behaviour, subjective norm, self-efficacy, intentions, and social support, which affects patients' quality of life.

Caregiver's knowledge is the result of knowing something after the family/caregiver carries out the care in the prevention of shackle, and improvement of the life quality of post-shackled patients. The results support that caregiver's knowledge affects the life quality of post-shackle patients. One's level of education is related to their knowledge. The higher the level of education, the better their ability to obtain information, thereby increasing one's knowledge [25]. 75% of caregivers with minimum junior high school education levels could positively influence family knowledge in taking care and improve the life quality of post-shackled patients.

An attitude is a form of evaluation or feeling reaction. One's attitude towards an object is a feeling of favour or disfavour. Attitude is a reaction or response that is still closed from someone to a stimulus or object [24]. Attitudes clearly show the connotation of the suitability of reactions to the certain stimulus, which in everyday life are emotional reactions to the social stimulus [22].

The results of this research showed that family attitudes affect the life quality of post-shackled patients. If the attitude of the family in caring for post-shackle patients improves, it will positively affect the life quality of post-shackle patients. It is stated [18] that families generally do not support the act of shackling; however, following

circumstances forces the caregiver to shackle if the patient goes rampage, financially poor, and unable to get treatment in hospital, and as a temporary measure.

Behavioural tendencies are caregiver responses to acceptance, care, prevention of shackles, and improvement in the life quality of post-shackle patients. The results of this study showed that the behaviour of caregivers did not affect the life quality of post-shackled patients. Family limitation in providing care is because of inconvenience and lack of help from family members. The risk of continued use of shackle patients will not occur if the family can provide good supervision and care for post-shackle patients. Also, subjective norm is normative belief of caregivers on the importance of acceptance of their behaviour by others, namely, family members, neighbours, health cadres and health workers, in matters related to the attempts to improve the life quality of post-shackle patients especially in care, treatment and psychosocial therapy. This study found that the subjective norms of caregivers did not affect the life quality of post-shackled patients. Factors related to family difficulties in caring family members who experience mental disorders include: 1) factors arising from the caregiver, 2) factors arising from patients, and 3) factors arising from the family/community [26].

Self-efficacy is one's belief in his ability to perform the behaviour that is based on the purpose. Self-efficacy, in this case, is the caregiver's belief about his ability to care, prevent of shackling, and improve of the life quality of post-shackle patients especially in psychosocial care, treatment, and therapy. The results of this study suggest that there was an effect of caregiver's self-efficacy on the life quality of post-shackle patients. Sufficient knowledge will also affect the caregiver's self-efficacy. The majority of post-shackle patients' caregivers with high school education backgrounds have better knowledge and influence their efficacy.

The results of other studies indicate that another factor that affects self-efficacy is experience. Experiences are events that have occurred and will increase self-efficacy [27]. Hence, one's experience can increase self-efficacy in carrying out a task. It is stated that social support that comes from family, friends, and others can make someone confident of what they are doing, in addition to knowledge and experience.

The intention is the caregiver's planning regarding the ability to prevent relapse and improve the life quality of post-shackle patients, especially in psychosocial care, treatment, and therapy. The results of this study have shown that caregiver's intentions have positive impact on patient's quality of life. One of the ways of improving the intention of caregivers is by psycho-education intervention using Multilevel Health Promotion to Shackling Prevention (MHPSP) [8].

Social support is the support received by post-shackle patients from caregivers/ close family in the form of support, instrument, information or advice, emotional support, and appreciation support. Social support will increase treatment in mental disorder patients [28]. However, in this study, this characteristic fails to show a direct positive effect to the quality of life of post-shackled patients.

Conclusion

In sum, this study reported that caregiver behaviour factors that could partially affect the life quality of post-shackle patients in Klaten and Sukoharjo were knowledge, attitudes, self-efficacy, and intention of caregivers. However, behavioural tendencies, subjective norms, and family support/caregiver did not affect the life quality of post-shackle patients. External factors may also have an impact on the quality of life of post-shackled patients. Further studies are needed to identify these confounding factors, such as insight.

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Authors' contributions

All authors contributed toward data analysis, drafting and revising the paper and agreed to be responsible for all the aspects of this work.

Conflict of Interest

We have no conflicts of interest to disclose.

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