A Cross-sectional Study of Factors Predicting Relapse in People with Schizophrenia

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Abstract: Schizophrenia is classified as a chronic mental disorder. It frequently induces relapse that can negatively impact the person and their family's quality of life. This cross-sectional study explored the main effect and interaction effect of factors related to relapse in people with schizophrenia. Three hundred fifty-two participants were included in this study. Four instruments used to collect data: a demographic data form; a Brief Psychotic Rating Scale; Medication Taking Behavior, and Perceived Social Support from Family scales. Descriptive statistics and binary logistic regression were used to analyze data.

Identified factors that can explain relapse in people with schizophrenia were the age of onset of schizophrenia, medication adherence, and the interaction effect between family history of psychiatric disorders and family support. Thus, the important implication for nursing practice is to develop an intervention that emphasizes family support to encourage people with schizophrenia to continue taking medication and develop effective mechanisms to cope with medication side-effect and stressful life event to prevent relapse for this population. In addition, close monitoring should be emphasized for those who have a family history of psychiatric disorders and earlier age of illness.

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Introduction

Globally over 20 million people are affected by schizophrenia.[1] Relapse rates of 28.0%, 43.0%, and 54.0% have been reported during the first, second, and the third year, respectively[2] resulting in increased functional, social, and occupational disability.[3] For people with schizophrenia, they would be more difficult to work, to study, and to take care of themselves.[4] Moreover, relapse impacts on the family members who are caregivers for their ill relatives. This problem creates distress, emotional and financial problems for the family.[5] Factors such as non-adherence to medication, and inadequate support from family, can lead to exacerbations in individuals with schizophrenia.[6] Therefore, studying the variables that increase relapse is crucial in order to create prevention plan.

To date, existing studies have focused on the main effect of factors influencing relapse in people with schizophrenia. Relapse is induced by personal vulnerability factors, including duration of illness and age at the onset of schizophrenia,[7] family history of psychiatric disorders,[8] the number of hospitalizations,[9] and psychiatric comorbidities.[6] These factors lead to the impairment of cognitive function[10] that affect a person's ability to take care of themselves, and to deal with stress.[10] As a result they often discontinue taking medication[11] which increases the potential for relapse. Moreover, lack of support from family impacts on a person's mental well-being and the outcome of schizophrenia, including its recurrence.[12] Individuals with schizophrenia have difficulty taking medication, often due to side effects, and with accessing medical care, and achieving rehabilitation.[13] In addition, substance abuse also affects relapse in people with schizophrenia by reducing the effectiveness of antipsychotic medications, and increasing the risk of medication non-adherence.[14] All of the above risk factors are associated with relapse in people with schizophrenia. The risk of relapse for people with schizophrenia can be explained by the Vulnerability-Stress Model.[15] The four domains of this Model are personal vulnerability factors, personal protective factors, environmental protective factors, and environmental stressors, with these factors having as interaction on each other.[16] However, limited studies have explored the interaction effect of each factor related to relapse in people with schizophrenia.

In Thailand, one study[17] investigated the main effect of predictors of psychotic symptoms in a person with schizophrenia, but did not focus on the relapse of participants. Moreover, currently there is a lack of evidence to test the interaction effect of each factor to explain relapse in people with schizophrenia. Therefore, this research aimed to explore the main effect and interaction effect among the four domains of factors above to provide vital information for mental health care providers, particularly psychiatric nurses, to basis the development of psychotic relapse prevention programs.

Literature Review and Conceptual Framework

Schizophrenia is a chronic mental health disorder and it can take a long time for remission. Most people with schizophrenia live in the community. In Thailand, approximately 98% of such individuals have returned to their community from hospital care with some psychotic symptoms.[18] Therefore, they still need continuous care to prevent the exacerbation of psychotic symptoms as they may regularly relapse during the course of illness. The relapse rate in Thai people with schizophrenia still high, accounting for 81.9%, and 78.0%, in the second and third episode within five years, respectively.[18] According to Thai cultural context, the majority of people with schizophrenia are living with family, including father, mother, spouse, and relatives[19] that have a close relationships with them. Family bonding and caring will enhance the better communication and relationships within the family, and self-esteem[20] of individuals with schizophrenia that encourages them to deal with everyday stress successfully and to structure healthy coping strategies.[21] On the other hand, family dysfunction or lack of support from family is a contributing factor to relapse.

There are various factors related to relapse in people with schizophrenia. The Vulnerability Stress Model of Schizophrenic Relapse,[16] along with an extensive review of available evidence, was used to investigate the interaction of the vulnerability factors, environmental stressors, and protective factors, that bring about worsening condition of people with schizophrenia.[16] Hereditary characteristics, brain and neurotransmitter impairment, and schizotypal traits[16] are all classified as personal vulnerability factors and can be significant in contributing to relapse if it interplay with environmental stressors.[15] For this study, the age at the onset of schizophrenia, duration of illness, the number of hospitalizations, family history of psychiatric disorders, and psychiatric comorbidities were all classified as personal vulnerability factors.

Neuroleptic medication, coping behavior, and self-efficacy are classified as personal protective factors

that provide positive help when dealing with the personal vulnerability factors and environmental stressors.[16] However, non-adherence to antipsychotic medications, increases the risk of relapse of people with schizophrenia,[22] meaning that a person's compliance to antipsychotic medication was adopted as a personal protective factor.

Environmental protective factors are those factors that helps a person deal with any environmental stressors they encounter.[16] These are related to family support, and the family's ability to solve problems. A family efficiently working together can help sustain emotional well-being, behavioral coping, and communication for all people who are living within family,[12] therefore, this family functioning was classified as an environmental protective factor in this study. Environmental stressors, including stressful life events, social environments with high levels of stimulation, and the overexpression of family member's emotions[16] increase stress levels of people with schizophrenia. Moreover, substances are an environmental variable that affecting relapse, by reducing the effectiveness of antipsychotic medication, and increasing the risk of medication non-adherence.[14] Thus, substance use disorders were adopted as an environmental stressor factor.

Study Aim

This research investigated the main and interaction effects among personal vulnerability variables (duration of illness, family history of psychiatric disorders, age at the onset of schizophrenia, the number of hospitalizations, and psychiatric comorbidities), personal protective variable (medication adherence), environmental protective variable (family support), and environmental stressors variable (substance use disorders) on relapse of people with schizophrenia in Thailand.

Methods

Design

A cross-sectional design was used.

Sample and Setting

People with schizophrenia who received services from three regional psychiatric hospitals from the northern, central, and southern regions of Thailand were eligible for this study. The participants were recruited when they met the inclusion criteria: males and females aged 18-60 years; diagnosed with schizophrenia by the psychiatrists based on the Diagnostic and Statistical Manual of Mental Disorders, fourth or fifth Edition (DSM-IV, DSM-5) and the International Classification of Diseases and Related Health Problems tenth revision (ICD-10); receiving treatment with antipsychotic medications; having a history of at least one hospital re-admission; being literate in Thai; and willing to participate in this study. The sample size was calculated by the ratio of 40 participants per one independent variable[23] so with eight independent variables, 320 participants were required. Then 10% was added to allow for the possibility of incomplete data.[23] This resulted a requirement for 352 people diagnosed with schizophrenia in this study. Proportionate sampling was employed to recruit participants at each site. These were 45, 224, and 83 from Northern, Central, and Southern Thailand, respectively. Each participant was selected by a purposive sampling method in accordance with the inclusion criteria.

Ethical Considerations

This study received approval (#029-2560) from the Research Ethical Committee of the Faculty of Nursing, Chiang Mai University. After obtaining permission from the settings, the principal investigator (PI) or research assistant (RI) screened the eligible potential participants who met the inclusion criteria. Then, the PI or RI approached the potential participants to explain the purposes and processes of study, confidentiality, potential risks and benefits, and their right to take part or to decline or withdraw from the study at any time. To assure anonymity and confidentiality of the participants' information, a code number was used in place of each participant's name. The participants

who were willing to join the study, were asked to sign the informed consent before completing the questionnaires.

Instruments

Four instruments were used. They were a Demographic Data Form, The Thai version of the 18-item Brief Psychotic Rating Scale (BPRS), The Medication Taking Behavior (MTB-Thai) and ehe Perceived Social Support from Family (PSS-Fa) scale.

Demographic Data Form.

This was developed by the researchers, and sought information on age, gender, marital status, education, duration of illness and number of hospitalizations, substance use disorders, age of onset, any history of the illness in the family, and psychiatric comorbidities.

The Thai version of the 18-item Brief Psychotic Rating Scale (BPRS).

The BPRS was developed by Overall and Gorham,[24] and translated into Thai by Kittirattanapaiboon.[25] It comprises 18-item with three sub-scales, including 6-items of positive symptoms, 2-items of negative symptoms, and 10-items of general psychopathology. Each item is scored on a 1 to 7 rating scale (1 = not present, 7 = extremely severe). A rating of 6 or 7 on one of the key psychotic symptom items of unusual thought content, hallucinations, and conceptual disorganization is used as an indication of a psychotic relapse.[26] The BPRS content validity and Cronbach's alpha reliability were 0.89, 0.74, respectively.[17] After receiving the permission from instrument's developers, the Cronbach's alpha reliability was tested in 10 persons with schizophrenia who had similar characteristic of the sample; in pilot study this was 0.80, and its reliability in main study was 0.81.

The Medication Taking Behavior-Thailand (MTB-Thai)

Sakthong and colleagues[27] developed six items of MTB-Thai, and it is used to assess how well patients with schizophrenia can maintain their medication regime (for example, "Have you ever forgotten to take medication in the last 2 weeks? How?"). Each item is scored on a 1 to 4 rating scale (where 1 means never, 4 means 5-6 times). Scores are added together, and a total out of 24 is available for each participant with a score of ≤ 21 demonstrating low adherence to the medication regime, 22-23 reflecting moderate adherence, and 24 being high adherence. For the content validity, the I-CVI value ranged from 0.92-1, and the S-CVI was 0.97.[27] The Cronbach's alpha reliability of MTB-Thai was 0.76, and test-retest reliability was 0.83.[27] Cronbach's alpha reliability in this study was 0.81. Permission was given by the developers of the tool for use in this study.

Perceived Social Support from Family (PSS-Fa) scale

Procidano and Heller[28] developed this scale, which was translated into Thai by the researchers with their permission. The scale measures 20-item with three response options available "yes", "no", and "do not know" to determine how much family support a person can get: 5 negative items (e.g. Most other people are closer to their family than I am.) were scored +1, when the answer was "no", while the rest of the positive items (e.g. My family gives me the moral support I need.), a "yes" answer was scored +1, and an answer of "do not know" scores zero for all questions. From the maximum score of 20, 0-6 indicates a low level, 7-13 indicates a moderate level, and 14-20 reflects perceived a high support from family.[29] The original PSS-Fa was translated into Thai by the primary investigator (PI) and another researcher. After that, the Thai version was back translated into English by two bilingual experts in Thailand in order to check for the meaning equivalence. The experts worked independently without any reference to the original English version. The back translations were then compared with the original version. The two researchers reviewed these versions together to identify and resolve discrepancies to assure semantic equivalence of the Thai translation with the original English version. The Thai version of PSS-Fa was then

tested for reliability with 10 people with schizophrenia. The Kuder-Richardson (KR-20) coefficient in the pilot study was 0.87, and in the main study 0.83.

Data Collection

After obtaining the required permissions, the PI and three trained RAs from each site collected the data based on the research protocol from July 2017 to February 2018. The total and complete data was 352 for analysis (100%).

Data Analysis

Participant characteristics were analyzed by descriptive statistics. Chi-square and Mann-Whitney U were employed to investigate differences between the psychotic relapse and non-psychotic relapse groups. The influences of selected factors on relapse was tested by binary logistic regression because the data did not show normal distribution. All relevant assumptions were tested prior to analysis process.

Results

There were two groups of participants, those who had experienced relapses (n = 220), and those who had not (n = 132). The mean age for each group was similar, 41.19 years and 41.98 years for the relapse and non-relapse groups, respectively. Most participants were male and single with a high school education (**Table 1**). No difference between the two groups was found in terms of demographic data described earlier.

Table 1 Demographic characteristics of people diagnosed with schizophrenia (n=352), divided by psychotic relapse and non-psychotic relapse groups.

Characteristics	Total (n=352) n(%)	Sample group		p-value
		Psychotic relapse (n=220) n(%)	Non-psychotic relapse (n=132) n(%)	
Gender				0.61[a]
Male	218 (61.9)	134 (38.1)	84 (23.9)	
Female	134 (38.1)	86 (24.4)	48 (13.6)	
Age (year)	$\overline{X}$ = 41.48	$\overline{X}$ = 41.19	$\overline{X}$ = 41.98	0.37[b]
	SD = 10.09	SD = 10.18	SD = 9.96	
	Range = 19-60	Range = 19-60	Range = 19-60	0.56[a]
19-30	58 (16.5)	37 (10.5)	21 (6.0)	
31-40	105 (29.8)	70 (19.9)	35 (9.9)	
41-50	111 (31.5)	69 (19.6)	42 (11.9)	
51-60	78 (22.2)	44 (12.5)	34 (9.7)	
Marital status				0.26[a]
Single	213 (60.9)	136 (38.9)	77 (22.0)	
Married	82 (23.4)	52 (14.9)	30 (8.6)	
Widowed	19 (5.4)	13 (3.7)	6 (1.7)	
Divorced	36 (10.3)	17 (4.9)	19 (5.4)	
Education				0.23[a]
Uneducated	8 (2.3)	5 (1.5)	3 (0.9)	
Primary school	96 (28.1)	59 (17.3)	37 (10.8)	
High school	129 (37.7)	89 (26.0)	40 (11.7)	
Bachelor's degree	56 (16.4)	36 (10.5)	20 (5.8)	
Master's degree	5 (1.5)	3 (0.9)	2 (0.6)	
Other	48 (14.0)	23 (6.7)	25 (7.3)	

Note. [a]chi-square test (x^2), [b]Mann-Whitney U test, *p < 0.05

Duration of illness, age at the onset of schizophrenia, and medication adherence were significantly different between psychotic relapse group and non-psychotic relapse group. The psychotic relapse group showed a higher mean of the duration of illness than the non-psychotic relapse group ($\overline{X}$= 14.13, 11.80, respectively). For the age at the onset of schizophrenia, participants in the psychotic relapses group had a mean age at the onset lesser than those in the non-psychotic relapse group ($\overline{X}$ = 27.05, 30.11, respectively), while the mean score of medication adherence showed a small difference, at 22.97 and 23.48 for the relapse and non-relapse groups, respectively. For family support, the finding was at a moderate level in both groups, and thus there was no significant difference (**Table 2**).

Table 2 Distribution on illness characteristics within the whole participant group (n=352) showing the divisions between the psychotic relapse (n=220) and non-psychotic relapse (n=132) groups.

Variables	Total (n=352) n(%)	Sample group		p-value
		Psychotic relapse (n=220) n(%)	Non-psychotic relapse (n=132) n(%)	
Duration of illness (year)	$\overline{X}$ = 13.26	$\overline{X}$ = 14.13	$\overline{X}$ = 11.80	0.02[b]*
	SD = 8.99	SD = 8.81	SD = 9.13	
	Range = 1-40	Range = 1-39	Range = 1-40	0.05[a]*
1-10	166 (47.2)	92 (26.1)	74 (21.0)	
11-20	107 (30.4)	75 (21.3)	32 (9.1)	
21-30	63 (17.9)	41 (11.6)	22 (6.3)	
31-40	16 (4.5)	12 (3.4)	4 (1.1)	
Family history of psychiatric disorders				0.29[a]
yes	80 (22.7)	54 (15.3)	26 (7.4)	
no	272 (77.3)	166 (47.2)	106 (30.1)	
Age at the onset of schizophrenia (year)	$\overline{X}$ = 28.20	$\overline{X}$ = 27.05	$\overline{X}$ = 30.11	0.01[b]*
	SD = 9.09	SD = 8.83	SD = 9.25	
	Range = 13-55	Range = 13-52	Range = 14-55	0.05[a]*
≤ 15	11 (3.1)	10 (2.8)	1 (0.3)	
16-30	221 (62.8)	144 (40.9)	77 (21.9)	
31-40	75 (21.3)	43 (12.2)	32 (9.1)	
41-50	41 (11.6)	22 (6.3)	19 (5.4)	
51-60	4 (1.1)	1 (0.3)	3 (0.9)	
The number of hospitalizations (time)	$\overline{X}$ = 3.61	$\overline{X}$ = 3.96	$\overline{X}$ = 3.02	0.06[b]
	SD = 3.90	SD = 4.30	SD = 3.04	
	Range = 1-25	Range = 1-25	Range = 1-20	0.13[a]
1-5	290 (82.4)	175 (49.7)	115 (32.7)	
6-10	42 (11.9)	28 (8.0)	14 (4.0)	
11-15	11 (3.1)	10 (2.8)	1 (0.3)	
16-20	5 (1.4)	3 (0.9)	2 (0.6)	
21-25	4 (1.1)	4 (1.1)	0 (0.0)	
Psychiatric comorbidity				0.25[a]
yes	10 (2.8)	8 (2.3)	2 (0.6)	
no	342 (97.2)	212 (60.2)	130 (36.9)	

Table 2 Distribution on illness characteristics within the whole participant group (n=352) showing the divisions between the psychotic relapse (n=220) and non-psychotic relapse (n=132) groups. (cont.)

Variables	Total (n=352) n(%)	Sample group		p-value
		Psychotic relapse (n=220) n(%)	Non-psychotic relapse (n=132) n(%)	
Patient substance abuse				0.79[a]
yes	88 (25.0)	54 (15.3)	34 (9.7)	
no	264 (75.0)	166 (47.2)	98 (27.8)	
Medication adherence	$\overline{X}$ = 22.97	$\overline{X}$ = 22.97	$\overline{X}$ = 23.48	0.02[b]*
	SD = 2.47	SD = 2.47	SD = 1.68	
	Range = 6-24	Range = 6-24	Range = 9-24	0.69[a]
Low (≤ 21)	38 (10.8)	28 (8.0)	10 (0.8)	
Moderate (22-23)	56 (15.9)	40 (11.4)	16 (4.5)	
High (24)	258 (73.3)	152 (43.2)	106 (30.1)	
Family support	$\overline{X}$ = 12.58	$\overline{X}$ = 12.58	$\overline{X}$ = 12.34	0.35[b]
	SD = 5.16	SD = 5.16	SD = 5.32	
	Range = 0-20	Range = 0-20	Range = 0-20	0.59[a]
Low (0-6)	48 (13.6)	29 (8.2)	19 (5.4)	
Moderate (7-13)	129 (36.6)	77 (21.9)	52 (14.8)	
High (14-20)	175 (49.7)	114 (32.4)	61 (17.3)	

Note. [a]chi-square test (x^2), [b]Mann-Whitney U test, *p < 0.05

When considering the main effect of selected factors, the findings revealed that the age at the onset of the illness and medication adherence could predict psychotic relapse. The total variance of relapse in participants with schizophrenia can be described by a combination of those two variables at 9.5% (by the Cox and Snell R^2) or 12.9% (by the Nagelkerke R^2) (**Table 4**). The odds of age at the onset of schizophrenia were 28.62 (95% CI = 1.18-694.26, p<0.05), indicating that people with schizophrenia who had an earlier age of onset had an increased risk of exacerbation 28.62 times of those who had a late-onset. Regarding medication adherence, the odds of relapse was 2.13 (95% CI = 1.09-4.14, p<0.05) meaning that participants with a moderate level of medication adherence had a risk of relapse about 2.13 times of those with high level of medication adherence (**Table 3**).

For the interaction effect among personal vulnerability variables, personal protective variables, environmental protective variables, and environmental stressors, the significant factors that could explain relapse were the interaction between family, history of psychiatric disorders and family support, as demonstrated by the binary logistic regression analysis results (**Table 3**). When considering the interaction effect, the total variance of relapse in people with schizophrenia can be described by a combination of those variables at 29.1% (by the Cox and Snell R^2) or 39.6% (by the Nagelkerke R^2) (**Table 4**). Regarding the interaction effect between family history of psychiatric disorders and family support, participants who did not have history of mental illness in family and perceived a moderate level of family support, the risk of relapse decreased .23 times (95% CI =.05-1.04, p<0.05), compared to those who had a family history and a perceived high support from family (**Table 3**).

Table 3 The main effect and interaction effect of factors related to psychotic relapse among people with schizophrenia by using binary logistic regression

Predictor	B	Wald	Sig.	Exp (B)	95% C.I. for Exp (B)	
					Lower	Upper
Main effect						
Age at the onset of schizophrenia (year)						
≤ 15	3.35	4.25	.03*	28.62	1.18	694.26
16-30	1.54	1.68	.19	4.65	.45	47.58
31-40	1.25	1.08	.29	3.48	.33	36.53
41-50	1.28	1.13	.29	3.61	.34	38.68
51-60[R]			.25			
Medication adherence						
Low level	.76	3.37	.06	2.14	.95	4.80
Moderate level	.76	4.99	.02*	2.13	1.09	4.14
High level[R]			.02*			
Interaction effect						
Have a family history of psychiatric disorders* high level of family support[R]			.16			
No family history of psychiatric disorders* Low level of family support	-2.02	4.33	.99	.13	.02	.89
No family history of psychiatric disorders* Moderate level of family support	-1.45	3.64	.05 *	.23	.05	1.04

Note. R = constant; p<0.05

Table 4 The total variance of the main effect and the interaction effect of psychotic relapse in people with schizophrenia

Total of variance	Cox & Snell R square	Nagelkerke R square
Main effect		
(age at the onset of schizophrenia, and medication adherence)	.095	.129
Interaction effect		
(family history of psychiatric disorders* family support)	.291	.396

Discussion

This study was designed to identify the main effects and interaction effects of factors related to relapse in people with schizophrenia. Considering the main effects, only age at the onset of schizophrenia and medication adherence together predicted relapse. With regard to the age at the onset, although it is an unmodified factor, our finding provides evidence that people who have an earlier onset age of illness also have a higher risk of relapse. The younger participants developed the illness, the more risk of a relapse, and the more chance of the illness becoming chronic over time. Therefore, early detection and prevention of exacerbation are important. Moreover, this finding confirms the importance of medication adherence that seems to be the most influential factor that we need to pay attention to in the treatment and care of

people with schizophrenia. Many studies have also found age at the onset can predict relapse.[7,30] Earlier age at the onset of schizophrenia can induce a long-term course of schizophrenic illness that contributes to a person's level of functional impairment[30] causing lower ability to take care of one's self and difficulty dealing with stressful life events.[10] In a situation where the psychotic symptoms are in an acute phase, the first-line of treatment is often antipsychotic medications to decrease the level of the symptoms. Antipsychotics are also used to prevent the deterioration of psychotic symptoms during the long-term course of illness.[31] Therefore, the level of compliance with antipsychotic medication is a significant protective factor that helps to prevent relapse in the Vulnerability-Stress Model.[16] Other related factors, such as the family history of psychotic disorders, the duration of illness, the number of hospitalizations, psychiatric comorbidities, substance use, and family support, could not predict relapse in this study. We hypothesized that that might be because the characteristics between the two groups were not statistically significant, given low power to predict relapse. This is contrary to previous studies that found that family history of psychiatric disease and substance abuse[8], number of hospitalizations[9], psychiatric comorbidities[6], and duration of illness[7] have differed between people with relapse and those who do non-relapse, and further predict relapse. Further studies are needed to confirm these predictive factors.

Interestingly we found that that the interaction among factors plays a significant role in predicting relapse, for example our findings emphasized the importance of support from family for individuals with schizophrenia. Approximately half of the Thai population live in extended families[32] where the family members can support each others, especially in rural areas. Family is the source of sharing love and warmth, and can encourage a mentally ill relative to encounter with the problem.[33] Although, caring for a relative with schizophrenia increases stress and burden, most family members are willing to taking care of them.[33] Furthermore, most primary caregivers are mothers who provide care based on maternal bonding and provide care endlessly.[34] Family members have a positive attitude towards people with schizophrenia, and understand that this illness is chronic and requires long-term of care. Thus, they will take a responsibility for caring and helping a mentally ill relative to achieve the social functioning.[35] These typical caring characteristics and atmosphere enables and encourage people with schizophrenia to deal with their stressful life events and develop more effective coping strategies which lead to less occurring of relapse. Moreover, the interaction effect between the history of family illness and family support confirms the etiology of the illness of schizophrenia, which has been widely accepted that it results from the interplay among the bio-psycho-social factors explained by the Stress Vulnerability Framework[16] for many decades. Therefore, factors that can predict the psychotic relapse might not be in a linear fashion. Studies related to relapse need to investigate factors causing both direct and indirect effects, as well as the interaction effect among those factors. This suggests a relapse prevention program is needed to engage people with schozophrenia, family members, and the community in closely working together.

Limitations

This study was a cross-sectional study which limits the capture of the relationship of variables associated with relapse that are dynamic and can change over time, including medication adherence, family support, and substance use. Moreover, there are other stressors that might impact on relapse, but were not included in the design of this study. Thus, the findings of this study must be interpreted with caution. Further research studies should need to be undertaken longitudinally, and other variables need to be investigated. These include the perceived stressful life events in order to improve the validity of finding and increase the ability to explain the variance of relapse in people with schizophrenia.

Conclusions and Implications for Nursing Practice

The findings of this study highlight the significance of medication adherence, age at the onset of schizophrenia, and the interaction factor between family history of psychiatric disorders, and family support. Psychiatric and mental health nurses and health teams need to screen for early detecting and preventing relapse of young people with schizophrenia, and enhance medication adherence behavior by monitoring and regular home visits, as well as other strategies. Emphasis should be placed on the involvement of family members, aimed to encourage and support their ill relative to adhere to the medication and enhance their ability to take care of themselves and deal with daily stress to try to prevent relapse. Psychiatric and mental health nurses and health care teams could utilize data from this study as foundational information to further develop comprehensive family interventions for early detection of signs of relapse, and enhancing medication compliance behavior to try to prevent relapse and also chronicity of the illness.

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การศึกษาภาคตัดขวางปัจจัยทำนายการกลับเป็นซ้ำของอาการทางจิตในผู้ที่เป็นโรคจิตเภท

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บทคัดย่อ: โรคจิตเภทเป็นโรคทางจิตเรื้อรังที่มักทำให้เกิดการกำเริบของโรค ที่อาจส่งผลกระทบทางลบต่อคุณภาพชีวิตของผู้ป่วยและครอบครัว การศึกษานี้เป็นการศึกษาอิทธิพลหลักและอิทธิพลร่วมของปัจจัยที่เกี่ยวข้องกับการกลับเป็นซ้ำของอาการทางจิตของผู้ที่เป็นโรคจิตเภท กลุ่มตัวอย่างในการศึกษามีจำนวนทั้งหมด 352 คน เก็บรวบรวมข้อมูลโดยใช้เครื่องมือวิจัย 4 ชุด ประกอบด้วย แบบบันทึกข้อมูลส่วนบุคคล แบบประเมินการกลับเป็นซ้ำของอาการทางจิต แบบประเมินความร่วมมือในการรักษาด้วยยา และแบบประเมินการสนับสนุนของครอบครัว วิเคราะห์ข้อมูลโดยใช้สถิติเชิงพรรณนาและสถิติถดถอยโลจิสติค

ปัจจัยที่สามารถการอธิบายการกลับเป็นซ้ำของอาการทางจิต คือ อายุที่เริ่มป่วยด้วยโรคจิตเภท ความร่วมมือในการรักษาด้วยยา และอิทธิพลร่วมระหว่างประวัติการเจ็บป่วยทางจิตในครอบครัวและการได้รับการสนับสนุนจากครอบครัว ดังนั้นผลการวิจัยสามารถนำไปใช้ในการปฏิบัติการพยาบาลเพื่อพัฒนาโปรแกรมที่เน้นการมีส่วนร่วมของครอบครัวเพื่อส่งเสริมให้ผู้ป่วยโรคจิตเภทรับประทานยาอย่างต่อเนื่อง และส่งเสริมกลไกการปรับตัวที่มีประสิทธิภาพ เพื่อให้ผู้ป่วยสามารถเผชิญกับผลข้างเคียงของการรักษาด้วยยา รวมถึงภาวะวิกฤติในชีวิตได้ ทั้งนี้เพื่อป้องกันการกลับเป็นซ้ำของอาการทางจิตและการเจ็บป่วยเรื้อรังในผู้ป่วยกลุ่มดังกล่าว รวมถึงการติดตามดูแลอย่างใกล้ชิดสำหรับผู้ที่มีประวัติการเจ็บป่วยทางจิตของครอบครัว และมีการเจ็บป่วยด้วยโรคจิตเภทเมื่ออายุยังน้อย

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คำสำคัญ: ปัจจัยทำนาย การสนับสนุนของครอบครัว ความร่วมมือในการรักษาด้วยยา การกลับเป็นซ้ำของอาการทางจิต โรคจิตเภท

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