A Causal Model of Personal Recovery Among People with Schizophrenia: A Cross-Sectional Study

Ratree Thongyu, Patraporn Bhatarasakoon, Sombat Skulphan, Hunsa Sethabouppha,*

Abstract: Personal recovery in schizophrenia involves reclaiming autonomy and meaning beyond symptom remission but is studied little. Examining the factors that shape this journey is critical for informing person-centered interventions, enhancing resilience, and improving long-term quality of life. This study developed and tested a causal model of factors influencing personal recovery in 315 patients with schizophrenia across five psychiatric hospitals in Thailand, using cross-sectional data and structural equation modeling. Data were gathered from validated measures of the Recovery Processes, Self-esteem, Anxiety and Depression, Cognitive Insight, Coping Self-efficacy, Social Support, and Personal-Social Performance, then analyzed with SPSS 26.0 and Mplus 7.0.

Participants reported moderate levels of personal recovery, and the final model, which explained 50% of variance, identified self-esteem as the most powerful driver, directly boosting recovery and buffering negative emotions. Negative emotions emerged as a significant risk factor undermining recovery. Cognitive insight further promoted recovery both directly and by easing negative emotions. Social support enhanced recovery by uplifting self-esteem, strengthening coping confidence, and alleviating negative emotions. High coping self-efficacy also directly improved recovery and social functioning, although social functioning did not independently predict recovery. These results highlight the importance of integrating nursing interventions that build self-esteem, sharpen cognitive insight, reinforce coping skills, expand social support, and manage negative emotions to foster a positive recovery cycle in schizophrenia care.

Keywords: Cognitive insight, Coping self-efficacy, Negative emotions, Personal recovery, Schizophrenia, Self-esteem, Social functioning, Social support

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Ratree Thongyu, *RN, PhD (Candidate), Faculty of Nursing, Chiang Mai University, Chiang Mai, Thailand. E-mail: Ratree.t@rsu.ac.th*

Correspondence to: Patraporn Bhatarasakoon, *RN, PhD, Professor, Faculty of Nursing, Chiang Mai University, Chiang Mai, Thailand. E-mail: patraporn.t@cmu.ac.th; ORCID ID: https://orcid.org/0000-0002-7792-2906*

Sombat Skulphan, *RN, PhD, Associate Professor, Faculty of Nursing, Chiang Mai University, Chiang Mai, Thailand. E-mail: sombat.sk@cmu.ac.th*

Hunsa Sethabouppha, *RN, PhD, Faculty of Nursing, Chiang Mai University, Chiang Mai, Chiang Mai, Thailand. E-mail: hunsa.s@cmu.ac.th*

Author contributions:

RT: Conceptualization, method and design, tool translation and validation, data collection, analysis, and interpretation, drafting, revising, and editing the manuscript, and final approval of the submitted version

PB: Conceptualization, method and design, supervision, tool translation and validation, double checking on data analysis and interpretation, revising and editing the manuscript, and final approval of the submitted version

SS: Method and design, supervision, data analysis and interpretation, and approval of the submitted version

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Introduction

Schizophrenia is a severe mental disorder affecting over 24 million people worldwide. It disrupts thinking, emotions, and social functioning, posing a major global public health challenge.[1] In Thailand, the prevalence of schizophrenia has been increasing, as evidenced by the rise in hospital treatments from 273,817 cases in 2019 to 314,250 cases in 2023.[2] Schizophrenia causes long-term impairments that undermine social functioning and quality of life. Stigma and rejection further erode self-esteem and confidence, deepening the impact of the illness. These challenges intensify when co-morbid with symptoms like paranoia, depression, and anxiety.[3] Individuals with schizophrenia face a 13% higher risk of suicide attempts compared to the general population.[4]

The meaning, structure, and key aspects of personal recovery are well-defined and generally consistent. Personal recovery is recognized as an ongoing process—a way of life, a mindset, and an approach to coping with daily challenges. A conceptual model of personal recovery in mental illness has been proposed;[5] however, it is not specifically tailored for people with schizophrenia, and existing evidence linking schizophrenia to personal recovery remains inconsistent. Research on the factors shaping personal recovery in schizophrenia is limited, with few studies identifying specific influences. Most existing studies have focused on clinical recovery, leaving the personal dimension underexplored.

To date, no study in Thailand has examined the factors influencing personal recovery in people with schizophrenia. Understanding these causal factors and their interrelationships is essential for designing effective interventions. To ensure a comprehensive analysis, this study employed structural equation modeling to develop and test a causal model, identifying both direct and indirect predictors of personal recovery in people with schizophrenia.

Conceptual Framework and Literature Review

Recovery from schizophrenia is multifaceted. Modern approaches focus on overall well-being and functional improvements, offering more hope than traditional views.[1,6] Enhanced recovery improves quality of life, independence, and societal acceptance, reducing stigma and economic burdens.[7-8] Slade[5] describes personal recovery as a dynamic process centered on leading a meaningful and fulfilling life while maintaining valued social roles, even amid ongoing symptoms. It involves four core elements: building a positive identity, finding personal meaning, taking responsibility for one's well-being, and engaging in meaningful social roles. These components, supported by strong social relationships, form the foundation of the personal recovery framework. Drawing from stage models, recovery is seen as a fluid, non-linear journey shaped by lived experiences and personal perceptions. Although these recovery tasks often follow a general sequence, they are influenced by individual beliefs and social contexts rather than a fixed order.[5]

As previously mentioned, the Personal Recovery Framework by Slade[5] offers a foundational understanding of recovery in individuals with mental illness. Building on this framework and insights from existing literature, this study proposed the Model of Personal Recovery Among Persons with Schizophrenia (MPR-PWS) to specifically capture the recovery process unique to individuals living with this illness.[5] By integrating Slade's theoretical concepts with empirical findings, the MPR-PWS model identifies key factors influencing recovery, including self-esteem, cognitive insight, coping self-efficacy, negative emotions, social functioning, and social support. These elements are vital in enhancing well-being and functional outcomes essential for recovery.[9-11] However, the direct influence of cognitive insight, social support, and social functioning on personal recovery in individuals with schizophrenia remains unclear.

According to the developed MPR-PWS model, personal recovery is a dynamic and individualized process through which individuals with schizophrenia cultivate self-worth, recognize their internal coping capacity, and perceive support from others as meaningful and accessible. This process also involves gaining cognitive insight into their condition, particularly the ability to reflect on their experiences without rigidly adhering to personal misperceptions, while maintaining emotional balance and engaging in self-care according to their capacity. While grounded in the broader understanding of recovery as a journey toward a meaningful life despite illness, this definition reflects the specific psychological and social dimensions emphasized in the context of this model. Existing evidence identifies a range of psychological and contextual variables that play significant roles in shaping personal recovery among individuals with schizophrenia. This study focuses on six key factors, each representing distinct dimensions of the recovery process: self-esteem, negative emotions, cognitive insight, coping self-efficacy, social support, and social functioning.

Self-esteem is broadly defined as an individual's overall evaluation of self-worth, encompassing positive and negative self-judgments.[11] A strong positive self-identity may be developed or strengthened through supportive interpersonal relationships that enhance self-perception.[5] Higher self-esteem supports personal recovery by enhancing emotional stability and reducing negative emotions. It also reinforces a positive self-concept and strengthens the internal sense of worth, thereby facilitating hope, autonomy, and a goal-oriented mindset. Thus, self-esteem influences personal recovery directly and indirectly, acting as a protective buffer against psychological distress.

Negative emotions, such as anxiety and depressive symptoms, are common in individuals with schizophrenia and are known to impede recovery progress.[12] These emotional states disrupt cognitive processing, undermine engagement in therapeutic activities, and erode one's belief in the possibility of change. In this model, negative emotions are considered a direct barrier to recovery and serve as a mediator that transmits the psychological impact of self-esteem, social support, and cognitive insight. Higher negative emotions hinder personal recovery by impairing emotional regulation and amplifying psychological distress.

Cognitive insight refers to the metacognitive ability to evaluate and correct one's distorted beliefs, particularly concerning psychotic experiences. Greater cognitive insight facilitates personal recovery by enabling individuals to reframe distorted beliefs and reduce emotional distress,[13] leading to a better understanding of the illness and more adaptive responses. It demonstrates both direct and indirect positive effects on personal recovery through reduced negative emotions.

Coping self-efficacy refers to the belief in one's capability to manage illness-related stressors and daily challenges.[14] Individuals with higher coping self-efficacy are expected to enhance personal recovery, especially when supported by strong social connections and functional roles. Higher coping self-efficacy is theorized to reduce negative emotions by increasing one's perceived ability to handle illness-related stress. This belief fosters proactive coping, diminishes feelings of helplessness, and promotes emotional regulation, protecting against psychological distress. It also contributes positively to social functioning, indicating its dual role in psychological and behavioral adaptation.

Social support is a crucial contextual factor that encompasses the perceived availability of emotional, informational, and instrumental support from others.[15] Stronger perceived social support enhances personal recovery through multiple mechanisms; it directly reinforces recovery. It indirectly promotes it by increasing self-esteem and coping self-efficacy and alleviating negative emotional states. Moreover, social support is critical in strengthening social functioning, particularly in collectivist societies where relational interdependence shapes daily functioning.

Social functioning is traditionally viewed as an indicator of recovery, referring to one's ability to engage in interpersonal relationships, work, self-care, and recreational activities.[16] It is influenced by the ability to cope with challenges and support from social resources. Additionally, higher levels of daily functioning are expected to contribute positively to recovery outcomes. Higher social functioning is commonly viewed as an outcome of successful recovery.

Drawing on Slade's Personal Recovery and Mental Illness framework and a comprehensive literature review, this study constructed a causal model (**Figure 1**) mapping the positive and negative direct and indirect influences of self-esteem, negative emotions, cognitive insight, coping self-efficacy, social support, and social functioning on personal recovery in people with schizophrenia. We hypothesized that this model would strongly fit the observed data.

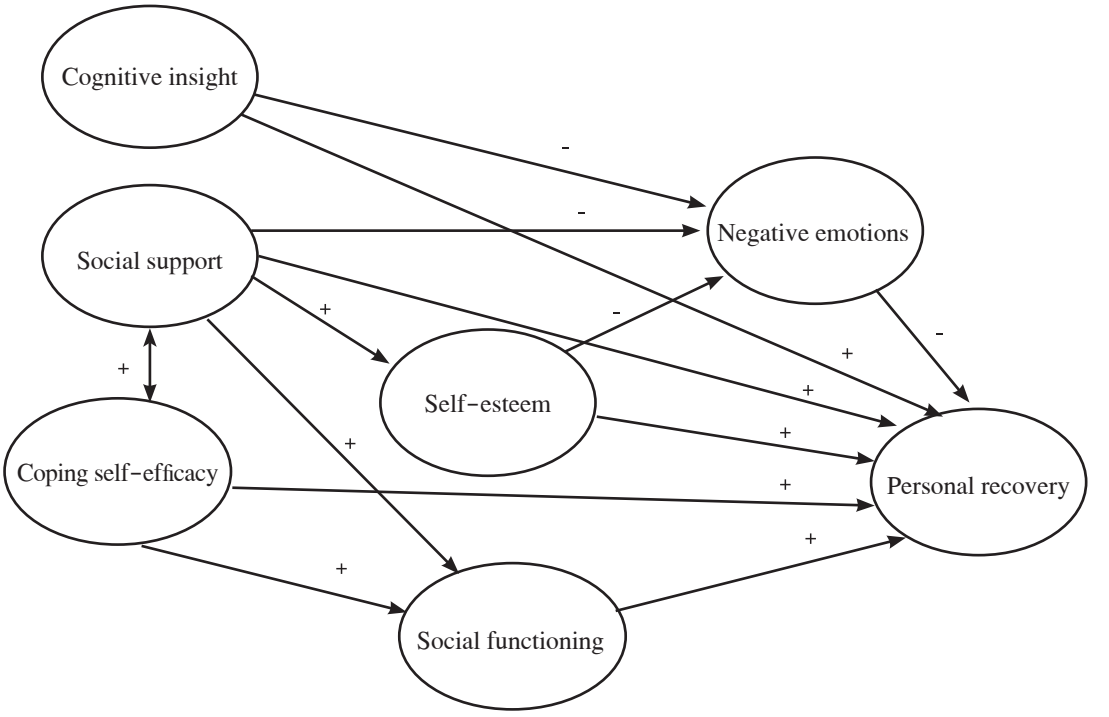

Figure 1. Hypothesized model of the MPR-PWS representing proposed relationships among study variables

Study Aim

To examine a proposed causal model of factors influencing personal recovery among Thai individuals with schizophrenia.

Methods

Study Design: This study employed a cross-sectional design and adhered to the STROBE guidelines for reporting observational cross-sectional research.

Sample and Setting: Purposive sampling was used to recruit individuals diagnosed with schizophrenia receiving treatment at 12 psychiatric hospitals under the Department of Mental Health across four regions of Thailand. The study sample included individuals who met the following inclusion criteria: 1) aged 18–60 years, 2) cognitive function score of ≥ 25 on the Montreal Cognitive Assessment-Thai version MoCA-T,[17] and 3) mild psychotic symptoms with the Brief Psychiatric Rating Scale (BPRS) score of ≤ 36.[18] Exclusion criteria w ere 1) moderate to severe intellectual disability and 2) a dual diagnosis of substance abuse. The sample size was determined using structural equation model analysis. The required sample size for structural equation model testing was determined using a minimum ratio of five respondents per estimated parameter.[19] With 63 parameters, the minimum required sample size was 315. Participants were selected using a multistage proportional random sampling method, ensuring alignment with the inclusion criteria. In the first stage, five hospitals were randomly selected from 12 psychiatric hospitals across Thailand—one from each region (Northern, Central, and Southern) and two from the Northeastern region, reflecting its division into upper and lower areas. In the second stage, participants were proportionally selected based on the number of schizophrenia cases attending the outpatient department (OPD) at each selected hospital. Eligible participants who met the inclusion criteria were recruited from each hospital in proportion to the required sample size until the target was achieved (**Figure 2**).

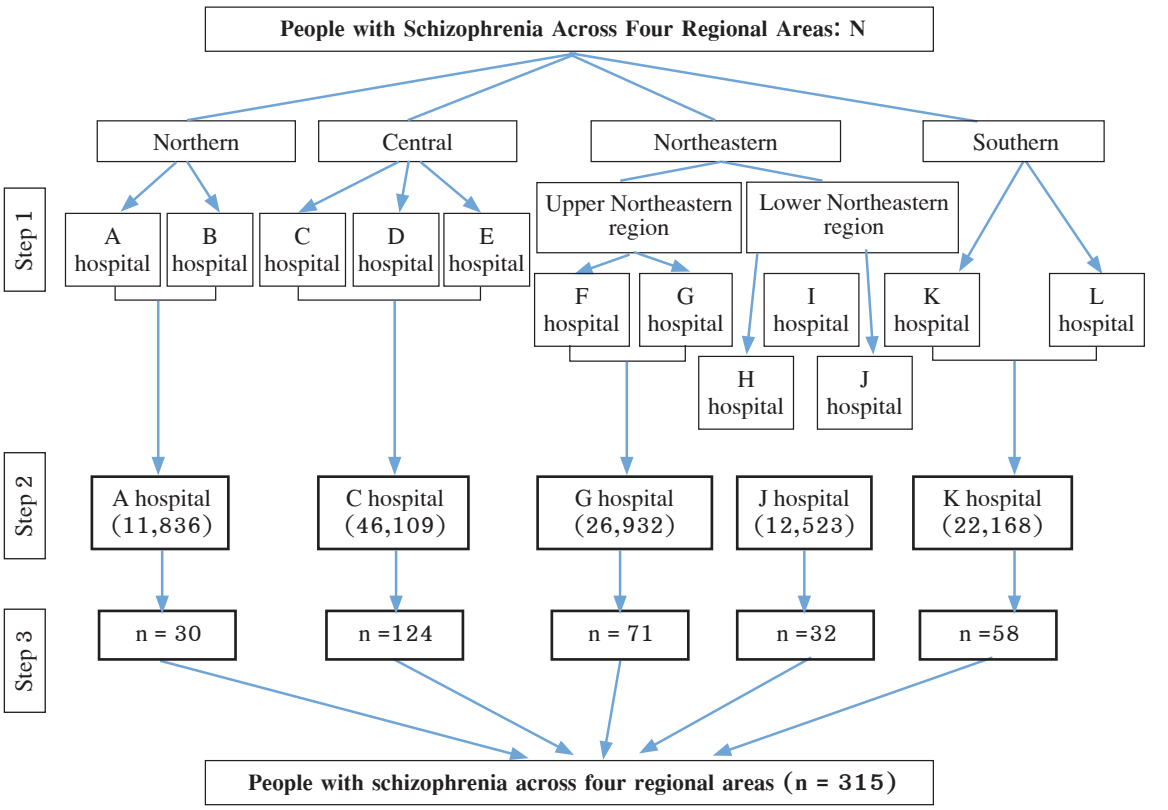

Figure 2. Cluster sampling procedure employed in the participant selection process

Ethical Considerations: This study was approved by the Research Ethics Committee of the Faculty of Nursing, Chiang Mai University (Code: 2564-FULL015), and the Department of Mental Health's Ethical Review Committee (Code: DMH.IRB 025/2565 BRm_Ful). The primary investigator (PI) met with potential participants, provided detailed information about the study, and obtained informed consent from them. Participation was voluntary, with the right to decline or withdraw at any time without consequences. Confidentiality and anonymity were strictly maintained throughout the research process.

Instruments: Eight instruments were used for data collection, three of which were translated into Thai with permission using the forward and backward translation method or cross-cultural adaptation, following the guidelines by Beaton et al.[20] These included the Process of Recovery Questionnaire,[21] the Beck Cognitive Insight Scale,[13] and the Client-Rated Coping Self-Efficacy Scale.[14] All instruments underwent content validity assessment by a panel of six experts, including specialists in instrument development and psychiatry. Construct validity was evaluated using confirmatory factor analysis (CFA) for all instruments, except the demographic data form. The findings showed that most fit indices were within acceptable ranges. Reliability was assessed through a pilot study involving 30 participants who met the inclusion criteria but were not included in the final sample. All instruments, except the demographic data form, were evaluated for reliability. The results—including content validity index (CVI), reliability scores from both the pilot study and the main study, and sample items—are presented in **Table 1.**

Table 1. Content validity index, Cronbach's alpha reliability, and sample items of the instruments

Instruments	Content validity index		Cronbach's alpha		Example of item
	I-CVI	S-CVI/Ave	Pilot study	Main study	
1. QPR	0.83-1.0	0.98	0.84	0.87	I feel able to take chances in life
2. RSES	N/A	N/A	0.84	0.90	I often think that I am not good at anything
3. HADS	N/A	N/A	0.83	0.84	I have anxious thoughts
4. BCIS	1.00	1.00	0.83	0.86	My interpretations of my experiences are definitely right
5. CSES	1.00	1.00	0.97	0.95	Look for something good in a negative situation
6. MSPSS	N/A	N/A	0.87	0.92	My family truly tries to help me
7. PSP	N/A	N/A	0.82	0.80	Personal hygiene care

Note. I-CVI = Item-level content validity index, S-CVI/Ave = Scale-level content validity index/Average method, QPR = Questionnaire about the Process of Recovery, RSES = Rosenberg Self-Esteem Scale, HADS = Hospital Anxiety and Depression Scale, BCIS = Beck Cognitive Insight Scale, CSES = Coping Self-Efficacy Scale, MSPSS = Multidimensional Scale of Perceived Social Support, PSP = Personal and Social Performance Scale, N/A = Not applicable because this instrument was not calculated.

A demographic data form: The PI developed a questionnaire to gather information on participants' background characteristics. This form consisted of closed questions addressing age, sex, religious affiliation, marital status, level of education, age at the onset of illness, and employment status.

The Process of Recovery (QPR), originally developed by Neil,[21] was translated into Thai with authorization using the back-translation method.[20] This instrument comprises 15 items within the QPR interpersonal subscale, all formulated positively. Responses are rated on a 5-point Likert scale,

ranging from 0 (strongly disagree) to 4 (strongly agree). The total possible score ranges from 0 to 60, with higher scores reflecting a greater level of personal recovery.

The Rosenberg Self-Esteem Scale (RSES), originally developed by Rosenberg,[11] was translated and culturally adapted into Thai by Wongpakaran and Wongpakaran.[22] This 10-item measure is divided into positive and negative subscales. Respondents rate positively phrased statements on a 4-point Likert scale from 3 (strongly agree) to 0 (strongly disagree). In contrast, negatively phrased statements are reverse-scored (0 for "strongly disagree" to 3 for "strongly agree"). Total scores span from 0 to 30, with higher scores indicating greater self-esteem.

The Hospital Anxiety and Depression Scale, developed by Zigmond and Snaith,[12] was used to measure anxiety and depression in this study. We employed the Thai translation by Nilchaikovit et al.[23] The scale consists of 14 items, evenly divided into anxiety and depression subscales. Respondents rate each item on a 4-point Likert scale (0–3), resulting in subscale scores ranging from 0 to 21. Scores are categorized as normal (0–7), borderline (8–10), or abnormal (11–21), with higher values indicating more severe negative emotional states.

The Beck Cognitive Insight Scale (BCIS), originally developed by Beck et al.,[13] was translated into Thai with permission, following the back-translation method recommended by Beaton et al.[20] The BCIS is composed of 15 self-report items, divided into two subscales: Self-Reflectiveness, which assesses objectivity, self-awareness, and willingness to accept feedback, and Self-Certainty, which assesses confidence in one's beliefs and resistance to change. Each item is estimated using a 4-point scale, ranging from 0 (strongly disagree) to 3 (strongly agree). A composite index is determined by subtracting the Self-Certainty score from the Self-Reflectiveness score, with higher index scores indicating greater cognitive insight.

The Client-Rated Coping Self-Efficacy Scale (CSES), originally developed by Chesney et al.,[14] was translated into Thai via the back-translation method with permission.[20] It comprises 26 items across three subscales—problem-focused coping, regulation of negative emotions and thoughts, and seeking support from family and friends. Each item is rated on an 11-point scale (0 = completely unable to 10 = fully capable), yielding a total score of 0–260, with higher scores indicating greater confidence in managing challenges and stress.

The Multidimensional Scale of Perceived Social Support (MSPSS), originally developed by Zimet et al.,[15] was employed in this study using the Thai translation and cultural adaptation by Wongpakaran and Wongpakaran.[24] This 12-item instrument assesses support from three sources—family, friends, and significant others—each rated on a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree). Responses are recoded to a 0–6 metric per item, resulting in a total score ranging from 0 to 72, with higher scores reflecting greater perceived social support.

The Thai Version of the Personal and Social Performance Scale (PSP), originally developed by Morosini et al.,[16] the PSP was utilized in this study. The Thai adaptation, translated by Srisurapanont et al.,[25] assesses social functioning using a 4-item rating scale that assesses socially productive activities, interpersonal relationships, self-care, and disruptive or aggressive behaviour. The fourth item, which evaluates disturbing/aggressive behaviour), is rated on a scale from 0 (absent) to 3 (severe). The total PSP score, ranging from 0 to 100, is derived from the combined severity ratings of these four areas, with a score above 50 indicating higher levels of social functioning.

Data Collection: This study was conducted from November 2022 to July 2023. Prior to data collection, the primary investigator (PI) trained five specialized psychiatric nurses to standardize the screening procedures and supervise data collection. Participants who consented to join the study were first assessed using the MoCA-T and BPRS to confirm eligibility. Upon confirmation, participants and their relatives signed informed consent forms. Research assistants then guided participants

to a private, comfortable area and distributed the questionnaires to them. The PI or assistants introduced each questionnaire, and participants completed them independently. The survey included eight sections, starting with demographic information, and took approximately 45 minutes to complete. Participants were encouraged to take a 15-minute break after the fourth section or whenever they needed to. The PI and assistants reviewed all responses, and incomplete questionnaires were excluded to ensure data quality and research reliability.

Data Analysis: A preliminary analysis was conducted to assess the distributional properties of the data and evaluate key assumptions, including missing data, outliers, normality, linearity, and multicollinearity, using SPSS version 26.0. The MPR-PWS model was then tested using Mplus version 7. No missing data were found, and only one potential outlier was identified. Upon verification, no data entry errors were detected. The case was retained for analysis because outliers may offer meaningful insights into the population. The slight skewness in the data necessitated the use of the bootstrap method for further analysis. Structural equation modeling was conducted using the maximum likelihood estimation. Model fit was assessed with χ,^{2} the χ^2/df ratio, CFI, TLI, RMSEA, and SRMR. Because the χ^2 statistic can be overly sensitive, greater emphasis was placed on the relative χ^2 (χ^2/df) as a more robust indicator of model fit.

Results

Demographic characteristics

A total of 315 individuals diagnosed with schizophrenia voluntarily participated in this study and completed all questionnaires. The majority were female (57.14%), with ages ranging from 19 to 60 years (M = 43.86, SD = 10.14), unmarried (57.46%), had attained a bachelor's degree (26.35%), and identified as Buddhist (88.25%). Nearly half (48.25%) lived with their families, and more than half had experienced the illness for 6 to 15 years (56.83%). Additionally, 81.91% were employed. The personal recovery scores among study participants varied from 14 to 59, with an average of 44.34 and a standard deviation of 5.31. These scores were classified into three levels using the mean and standard deviation as reference points. Most participants (76.83%) were categorized at a moderate level.

Results of model testing

The correlation matrix **(Table 2)** reveals no excessively high intercorrelations. Linearity was confirmed, and multicollinearity was ruled out based on acceptable tolerance values (0.506-0.856) and VIF values (1.169-1.976).

Table 2. Matrix of correlations among all variables

Variable	COIN	NEMO	SEES	COPE	SSO	SFO	PR
Cognitive insight (COIN)	1						
Negative emotions (NEMO)	-0.223**	1					
Self-esteem (SEES)	0.297**	-0.402**	1				
Coping self-efficacy (COPE)	0.224**	-0.527**	0.479**	1			
Social support (SSO)	-0.148*	-0.263**	0.167**	0.337**	1		
Social functioning (SFO)	-0.151*	-0.347**	0.143*	0.253**	0.231**	1	
Personal recovery (PR)	0.198**	-0.478**	0.590**	0.502**	0.252**	0.143**	1

Note. * $p < 0.05$, ** $p < 0.01$

Figure 1 illustrates the hypothesized model of the MPR-PWS, while **Figure 3** presents the results of model testing. Modifications were made because the initial model did not meet the goodness-of-fit criteria. The revised model fits well with the empirical data (**Table 3**).

Table 3. Comparison of goodness-of-fit indices between the hypothesized and modified MPR-PWS models

Goodness-of-fit indices	Criteria of acceptability	Hypothesized model	Modified model
Chi-square (χ^2)	Non-significant	418.07, $p < 0.001$	135.31, $p < 0.001$
Degree of freedom (df)	-	105.00	79.00
Relative Chi-square (χ^2/df)	≤ 2	3.98	1.71
Comparative fit index (CFI)	≥ 0.90	0.84	0.97
Tuker-Lewis fit index (TLI)	≥ 0.90	0.80	0.95
Root mean square error of approximation (RMSEA)	≤ 0.05	0.10	0.04
Standardized root mean square residual (SRMR)	≤ 0.05	0.12	0.04

In examining the relationships between latent variables and personal recovery, self-esteem was found to have the strongest direct and overall positive impact on personal recovery. It influenced personal recovery, both directly and indirectly, by reducing negative emotions. Similarly, cognitive insight and social support positively affected personal recovery both directly and indirectly by lowering negative emotions. Additionally, social support had a direct and positive impact on self-esteem, coping self-efficacy, and social functioning and a negative impact on negative emotions. Both coping self-efficacy (positive) and negative emotions (negative) had a direct impact on personal recovery. Contrary to the hypothesized model, social functioning did not have a direct or indirect effect on personal recovery. Notably, these findings highlight the crucial role of negative emotions in mediating the effects of self-esteem, social support, and cognitive insight on personal recovery.

The model of personal recovery in people with schizophrenia was primarily influenced by self-esteem, which had the highest total effect. This was followed by social support, cognitive insight (positive), and negative emotions (negative). Among these factors, self-esteem exerted the strongest positive direct impact on personal recovery, followed by negative emotions (negative), cognitive insight (positive), coping self-efficacy (positive), and social support (positive). **Table 4** presents the direct, indirect, and total effects among latent variables. The model accounted for 50% of the variance in personal recovery.

Table 4. The direct effect (DE), the indirect effect (IE), the total effect (TE), and the multi-relative co-efficient (R2) of the MPR-PWS model

Endogenous variables	R^2	Influencing variables	TE	DE	IE
Negative emotions	0.63	Self-esteem	-0.59^{***}	-0.59^{***}	-
		Social support	-0.37^{***}	-0.26^{**}	-0.11^{**}
		Cognitive insight	-0.34^{***}	-0.34^{***}	-
Self-esteem	0.04	Social support	0.19^{**}	0.19^{**}	-
Social functioning	0.17	Coping self-efficacy	-0.27^{**}	-0.27^{**}	-
		Social support	-0.23^{**}	-0.23^{**}	-

Table 4. The direct effect (DE), the indirect effect (IE), the total effect (TE), and the multi-relative co-efficient (R2) of the MPR-PWS model (Cont.)

Endogenous variables	R^2	Influencing variables	TE	DE	IE
Personal recovery	0.50	Self-esteem	0.55^{***}	0.39^{***}	0.16^{*}
		Social support	0.28^{***}	0.12^{**}	0.16^{***}
		Cognitive insight	0.28^{*}	0.19^{*}	-0.09^{*}
		Negative emotions	-0.27^{**}	-0.27^{**}	-
		Coping self-efficacy	0.12	0.14^{*}	-0.02
		Social functioning	0.06	0.06	-
Coping self-efficacy	-	Social support	0.36	0.36	-

Note. *p < 0.05, ** p < 0.01, ***p < 0.001

Moreover, a bootstrap procedure with 5000 iterations further validated these results, supporting the model's adequacy. The model fit analysis indicated a good fit to the data. The chi-square test ($\chi^2 = 135.318$, df = 79, p = 0.0001) was significant; however, additional indices were examined due to the sensitivity of the chi-square test to sample size. The RMSEA was 0.048 (90% CI: 0.034-0.061), while the CFI (0.972) and TLI (0.952) exceeded the 0.90 threshold, confirming a strong fit (**Figure 3**).

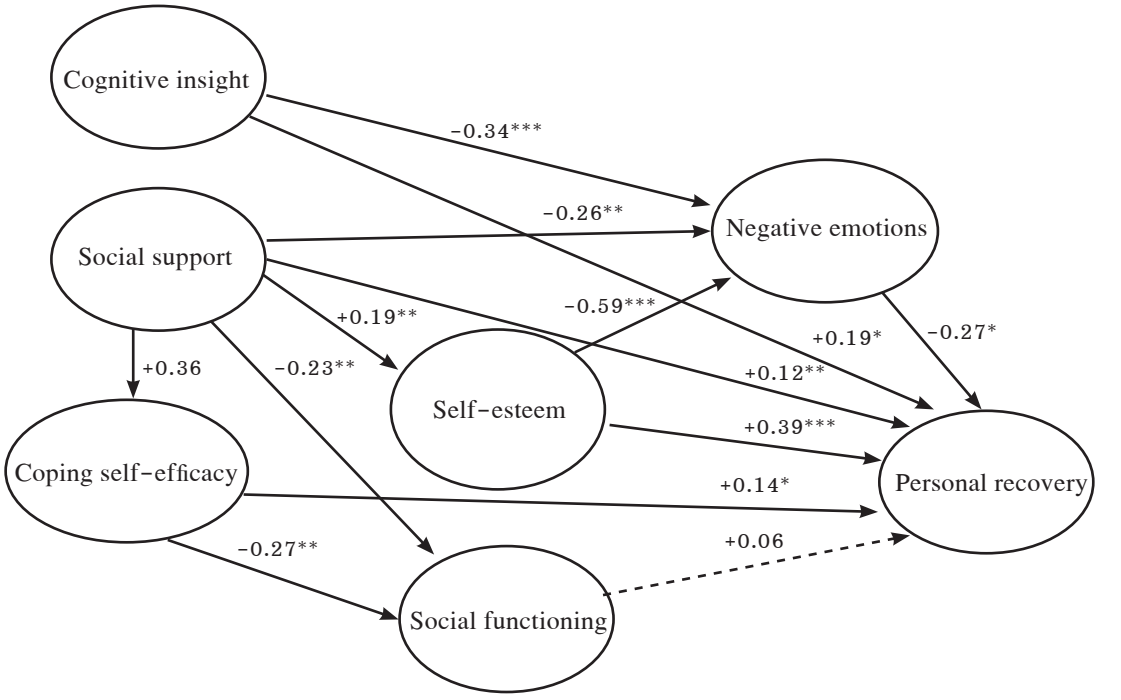

Figure 3. Final modified structural model of the MPR-PWS illustrating the relationships among key variables

Discussion

In this study, we developed and tested the MPR-PWS model. The average recovery score was moderate, aligning with prior studies conducted in China.[26,27] Several factors may contribute to this level of recovery. In Thai culture, family support helps reduce isolation and enhances well-being.[28] Employment (81.91%) fosters social integration and self-worth. Twenty-six cognitive function assessments using the MoCA-T[17] revealed no deficits, supporting daily functioning and recovery.[29,30]

Cognitive insight demonstrated both direct and indirect contributions to personal recovery, with its indirect effect operating through the reduction of negative emotions. Individuals who could recognize and re-evaluate distorted beliefs were more likely to experience fewer emotional difficulties and achieve greater recovery outcomes.[13,30] This finding reinforces the critical role of cognitive insight in fostering a deeper understanding of one's mental illness, which in turn may improve treatment adherence, self-reflection, and psychological growth.[10,13] However, it also prompts a more critical examination of how insight is cultivated in clinical settings. While enhanced insight can support recovery, it may also expose individuals to increased emotional distress if not accompanied by adequate emotional support and coping resources. This highlights the need for integrative interventions that balance insight development with emotional regulation strategies to maximize recovery benefits without exacerbating vulnerability.

Social support emerged as a significant factor influencing personal recovery, though its direct effect was relatively modest. Notably, its indirect impact—mediated through reductions in emotional distress and enhanced coping self-efficacy—was more substantial. This suggests that social support plays a nuanced yet powerful role in the recovery process. While it may not directly transform recovery outcomes, it fosters the psychological conditions necessary for recovery to occur.

These findings underscore the importance of interpersonal relationships—whether with family, peers, or professionals—in promoting emotional resilience and empowering individuals to manage their illness more effectively. This is particularly critical in collectivist cultures like Thailand, where strong social ties and communal interdependence are integral to identity and well-being.[3-6,33,39] However, the relatively small direct effect raises essential questions about the quality and type of support received. Not all support is beneficial; some forms may be overprotective, stigmatizing, or disempowering, especially in mental health contexts. Future research should explore the dynamics of social support—its sources, perceived helpfulness, and cultural interpretations—to better understand how it can be optimized to support recovery.

Coping self-efficacy emerged as a significant predictor of social functioning and personal recovery. Individuals with stronger confidence in managing illness-related challenges reported better outcomes, aligning with prior research linking coping confidence to improved stress management and daily functioning.[6,14] However, this highlights a critical consideration: while self-efficacy is beneficial, its development may depend heavily on access to resources and support. Without these, fostering self-efficacy alone may be insufficient to sustain recovery, emphasizing the need for comprehensive, context-sensitive interventions.

Interestingly, social functioning did not exhibit a significant direct effect on personal recovery in this model. This challenges the assumption that external social engagement alone drives recovery, suggesting instead that personal recovery is more deeply rooted in internal processes such as self-acceptance, meaning-making, and psychological growth.[34,35] While social activity supports functioning, it may not reflect the subjective, individualized nature of recovery. This finding reinforces the perspective that true recovery

extends beyond symptom control and daily functioning to encompass personal meaning and well-being.[5,36]

Self-esteem emerged as the strongest predictor of personal recovery. Individuals with a stronger sense of self-worth were more likely to feel hopeful and autonomous in their recovery journey.[5] Higher self-esteem was also linked to lower emotional distress, indirectly boosting recovery outcomes.[11] This reinforces existing evidence that self-esteem is a key psychological resource, promoting emotional resilience and long-term recovery in schizophrenia.[11,31] However, it also highlights the need for recovery-oriented interventions that explicitly focus on rebuilding self-esteem, which is often eroded by stigma, discrimination, and the chronic nature of the illness.

Negative emotions had a significant adverse effect on personal recovery and acted as a key mediator between psychological and social variables. Individuals experiencing high levels of anxiety, sadness, or hopelessness reported notably lower recovery outcomes.[12] This underscores the critical need to prioritize emotional regulation in recovery-oriented care.[32,39] Addressing emotional distress alleviates suffering, enhances engagement in therapeutic activities and supports personal growth.[12,23,39] Neglecting this dimension may undermine other recovery efforts, regardless of improvements in insight, coping, or social support.

Overall, the tested model explained 50% of the variance in personal recovery, 63% of the variance in negative emotions, and 17% of the variance in social functioning. These findings highlight the central role of psychological strengths—especially self-esteem and coping self-efficacy—in driving recovery while also emphasizing the need to manage emotional distress and strengthen social support.[1,5,27,39] Recovery in schizophrenia must move beyond symptom control to encompass personal goals, emotional well-being, and meaningful social connection, reflecting a more holistic and person-centered approach to care.

Limitations

While this study offers important insights into personal recovery among individuals with schizophrenia, several limitations should be noted. First, the cross-sectional design captures only a single point in time, limiting the ability to examine the dynamic, non-linear nature of recovery or draw definitive causal conclusions. Longitudinal research is needed to better understand how key factors, such as cognitive insight, social support, and coping self-efficacy, change and interact over time.

Second, limitations in measurement tools may have affected the findings. The Thai version of the Personal and Social Performance Scale (Thai-PSP)[24] showed limited sensitivity in detecting variations in social functioning. Using a more comprehensive, multidimensional instrument that captures psychological, social, and vocational domains could enhance the precision of future assessments and improve cross-study comparability.

Conclusions and Implications for Nursing Practice

The MPR-PWS model offers a comprehensive and evidence-based framework for understanding personal recovery in individuals with schizophrenia. It emphasizes the critical role of psychological strengths—particularly cognitive insight, self-esteem, emotional regulation, and coping self-efficacy—in driving recovery while underscoring the mediating influence of emotional distress. The model also reaffirms the value of social support systems, especially in collectivist cultures, where family and community play a central role in recovery.

These findings suggest that nursing practice should shift beyond symptom-focused care toward a more person-centered, recovery-oriented approach. Psychiatric nurses should prioritize interventions

that help individuals reframe distorted beliefs, build self-worth, regulate emotions, and strengthen coping abilities. Concurrently, addressing negative emotional states such as anxiety and hopelessness must be an integral part of care, not an afterthought.

This model also provides a foundation for developing measurable, goal-driven recovery plans. By integrating these insights into nursing curricula and clinical protocols, psychiatric nurses can be better equipped to deliver tailored, impactful care. Ultimately, advancing recovery in schizophrenia requires not only clinical competence but also a sustained commitment to empowering individuals to reclaim purpose, identity, and connection in their lives.

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แบบจำลองเชิงสาเหตุของการคืนสู่สุขภาวะส่วนบุคคลในผู้ป่วยจิตเภท : การศึกษาแบบภาคตัดขวาง

ราตรี ทองยู ภัทราภรณ์ ภทรสกุล สมบัติ สกุลพรรณ์ หรรษา เศรษฐบุปผา*

บทคัดย่อ: การคืนสู่สุขภาวะส่วนบุคคลในผู้ป่วยจิตเภท เป็นกระบวนการที่มุ่งเน้นการฟื้นคืนอำนาจในการกำหนดชีวิตตนเองและค้นพบความหมายใหม่ของชีวิตที่อยู่นอกเหนือจากการทุเลาของอาการ อย่างไรก็ตามประเด็นนี้ยังได้รับการศึกษาในระดับที่จำกัด การศึกษานี้มีวัตถุประสงค์เพื่อพัฒนาและทดสอบแบบจำลองเชิงสาเหตุของปัจจัยที่มีอิทธิพลต่อการคืนสู่สุขภาวะส่วนบุคคลในผู้ป่วยจิตเภทจำนวน 315 ราย จากโรงพยาบาลจิตเวช 5 แห่งในประเทศไทย โดยใช้ข้อมูลแบบภาคตัดขวางและการวิเคราะห์สมการโครงสร้าง (SEM) ข้อมูลถูกรวบรวมจากแบบวัดที่ผ่านการตรวจสอบความเที่ยงตรงและความเชื่อมั่น ซึ่งครอบคลุมด้านต่าง ๆ ได้แก่ กระบวนการคืนสู่สุขภาวะส่วนบุคคล การเห็นคุณค่าในตนเอง ความวิตกกังวลและภาวะซึมเศร้า การหยั่งรู้ทางปัญญา สมรรถนะแห่งตนในการเผชิญปัญหา การสนับสนุนทางสังคม และการทำหน้าที่ในสังคม จากนั้นวิเคราะห์ข้อมูลด้วยโปรแกรม SPSS เวอร์ชัน 26.0 และ Mplus เวอร์ชัน 7.0

ผลการวิจัยพบว่าผู้เข้าร่วมมีระดับการคืนสู่สุขภาวะส่วนบุคคลในระดับปานกลาง โดยแบบจำลองสุดท้ายสามารถอธิบายความแปรปรวนของการคืนสู่สุขภาวะส่วนบุคคลได้ร้อยละ 50 และแสดงให้เห็นว่า การเห็นคุณค่าในตนเองเป็นปัจจัยขับเคลื่อนที่สำคัญที่สุด โดยมีผลกระทบโดยตรงต่อการคืนสู่สุขภาวะส่วนบุคคล และมีบทบาทในการลดอารมณ์เชิงลบซึ่งเป็นกลไกป้องกันทางอารมณ์ ทั้งนี้ อารมณ์เชิงลบเป็นปัจจัยเสี่ยงที่ส่งผลในทางลบต่อการคืนสู่สุขภาวะส่วนบุคคลอย่างมีนัยสำคัญ ในขณะที่การหยั่งรู้ทางปัญญา มีบทบาทสนับสนุนการคืนสู่สุขภาวะส่วนบุคคลทั้งโดยตรงและผ่านการลดความทุกข์ทางอารมณ์ การสนับสนุนทางสังคม ช่วยส่งเสริมการคืนสู่สุขภาวะโดยการเสริมสร้างการเห็นคุณค่าในตนเอง เพิ่มความมั่นใจในการเผชิญปัญหา และลดอารมณ์เชิงลบ สมรรถนะแห่งตนในการเผชิญปัญหาในระดับสูง ยังมีผลกระทบทางบวกโดยตรงต่อทั้งการคืนสู่สุขภาวะส่วนบุคคล และการทำหน้าที่ทางสังคม อย่างไรก็ตาม พบว่า การทำหน้าที่ทางสังคมไม่ได้ส่งผลโดยตรงต่อการคืนสู่สุขภาวะส่วนบุคคล ผลลัพธ์เหล่านี้สะท้อนให้เห็นถึงความสำคัญของการบูรณาการแนวทางการพยาบาลที่เน้นการส่งเสริมการเห็นคุณค่าในตนเอง พัฒนาการหยั่งรู้ทางปัญญา เสริมสร้างทักษะการเผชิญปัญหา ขยายเครือข่ายการสนับสนุนทางสังคม และการจัดการอารมณ์เชิงลบ เพื่อสร้างวงจรการคืนสู่สุขภาวะส่วนบุคคลเชิงบวกที่ยั่งยืนในระบบการดูแลผู้ป่วยจิตเภท

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คำสำคัญ: การหยั่งรู้ทางปัญญา สมรรถนะแห่งตนในการเผชิญปัญหา อารมณ์เชิงลบ การคืนสู่สุขภาวะส่วนบุคคล โรคจิตเภท การเห็นคุณค่าในตนเอง การทำหน้าที่ทางสังคม การสนับสนุนทางสังคม

ราตรี ทองยู *นักศึกษาปริญญาเอก คณะพยาบาลศาสตร์ มหาวิทยาลัยเชียงใหม่ E-mail: Ratree.t@rsu.ac.th*

ติดต่อที่ : ภัทราภรณ์ ภทรสกุล* *ศาสตราจารย์ คณะพยาบาลศาสตร์ มหาวิทยาลัยเชียงใหม่ E-mail: patraporn.t@cmu.ac.th; ORCID ID: https://orcid.org/0000-0002-7792-2906*

สมบัติ สกุลพรรณ์ *รองศาสตราจารย์ คณะพยาบาลศาสตร์ มหาวิทยาลัยเชียงใหม่ E-mail: sombat.sk@cmu.ac.th*

หรรษา เศรษฐบุปผา *อาจารย์ คณะพยาบาลศาสตร์ มหาวิทยาลัยเชียงใหม่ E-mail: hunsa.s@cmu.ac.th*