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ORIGINAL ARTICLE

Development of a Care Model for Patients with Serious Mental Illness and Substance Use at High Risk of Violence in Yang Talat District, Kalasin Province

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Abstract

This action research, guided by the Kemmis and McTaggart cycle, aimed to study the situation and problems, and to develop and evaluate a care model for patients with serious mental illness and substance use at high risk of violence (SMI-V) in Yang Talat District, Kalasin Province. Participants were all 32 SMI-V patients in the Community-Based Treatment (CBTX) program in Ban Kham, and 45 health network members. Instruments included the Brief Psychiatric Rating Scale (BPRS), the Overt Aggression Scale (OAS), and measures of medication adherence, quality of life, knowledge, skills and satisfaction. Data were analyzed using descriptive statistics, paired t-test and exact McNemar's test, with Holm adjustment. The YT-VCare Model comprised five components: surveillance and risk assessment, team and network capacity building, rapid referral and crisis management, case management with home visits, and stigma reduction. After implementation, BPRS scores decreased from 41.56 ± 8.73 to 27.34 ± 6.12 (mean difference 14.22, 95% CI 11.55-16.89; $p < .001$), OAS scores decreased from 9.84 to 3.47 ($p < .001$). Good treatment adherence increased from 40.63% to 84.38% (exact McNemar $p = .0001$), whereas patients committing violence in the community decreased from 21.88% to 3.13% (exact McNemar $p = .031$; Holm-adjusted $p = .063$). Network members' knowledge increased from 11.38 to 16.87 ($p < .001$), and satisfaction was high (mean = 4.52). However, with a one-group pretest-posttest design and no comparison group, causal effects cannot be concluded, and effects on relapse and community violence remained unclear after multiplicity adjustment.

Keywords: Mental Disorders, Substance-Related Disorders, Violence, Community Mental Health Services, Community-Based Participatory Research

Introduction

Mental health and substance use problems are major global issues affecting large populations. The World Health Organization reported that in 2019, one in eight people worldwide, or more than 970 million, lived with a mental health condition,[1] and the latest data for 2021 show more than one billion people with mental disorders.[2] In Thailand, psychiatric service users increased from 1.30 million in fiscal year 2015 to 2.90 million in fiscal year 2023.[1] Patients with serious mental illness with high risk to violence (SMI-V) requiring follow-up numbered 27,737, but only 23.34% were followed up.[1] In fiscal year 2025, 96.18% of SMI-V patients who entered treatment received continuous care without repeated violence, exceeding the 85.00% target,[3] reflecting that continuous community care is central to violence prevention.

Kalasin Province, in northeastern Thailand, has a population of approximately 985,000 and 18 districts. Data from 2022-2024 showed that SMI-V patients in the province experienced medication discontinuation, service delays exceeding 48 hours, relapse, and community violence, all increasing every year (violent incidents rose from 23 to 47).[4] Yang Talat District is an area at risk for drug problems, and the number of SMI-V patients increased from 28 in 2022 to 38 in 2024, a 35.71% increase over three years. Between 2022 and 2024, medication discontinuation, delayed services, and relapse also increased every year, and community violent incidents rose from 6 to 12, mostly physical assaults on family members (58.33%).[5] This study purposively selected Ban Kham, Khlong Kham Subdistrict, as the study site because it had 32 SMI-V patients enrolled in the CBTX program, accounting for 84.21% of all SMI-V patients in the district (38 in 2024), and an existing CBTX team, enabling complete follow-up. The conclusions of this study are therefore limited to Ban Kham.

The Department of Mental Health has established a standard of care for SMI-V patients (V-Care) emphasizing systematic prevention, assessment, treatment, and follow-up of at-risk patients,[6] using standardized tools such as the Brief Psychiatric Rating Scale (BPRS) and the Overt Aggression Scale (OAS). Concepts previously used to develop care models include Kodner's integrated care,[7] Bandura's social learning theory of aggression,[8] Cobb's social support theory,[9] and case management. Research in a nearby area found that a network-participatory care model in Don Tan District, Mukdahan Province, reduced psychiatric symptom scores in 88.40% of patients.[10] However, facilitators and barriers to community care vary by context; key barriers include negative attitudes, staff shortages, and insufficient budgets.[11] These studies focused mainly on nursing practice guidelines or network participation, and no report was found on developing an SMI-V care model that integrates the hospital, the Community-Based Treatment (CBTX) team, and network partners specifically in the context of Yang Talat District. This is the knowledge gap this study aims to fill.

Against this background, the key problems in Yang Talat District were the lack of a systematic surveillance and follow-up system, the absence of clear standard guidelines, insufficient knowledge and skills among staff and CBTX members in risk assessment and management of

violent behavior, an ineffective referral and coordination system between the hospital and the community, and persistent negative attitudes and stigma toward patients in the community. There is therefore an urgent need to develop a systematic, multisectoral care model for SMI-V patients. The researcher thus used action research to develop a model suited to the local context to reduce symptom exacerbation, prevent violent incidents, and enhance community safety.

Conceptual framework and hypotheses: The conceptual framework was developed from the Kemmis and McTaggart action research cycle[12] together with the Department of Mental Health's V-Care standard,[6] as shown in Figure 1. Hypotheses were H1: BPRS and OAS scores after implementation would be lower than before; H2: the proportions of patients committing violence and relapsing after implementation would be lower than before; and H3: network members' knowledge and skill scores after implementation would be higher than before. The BPRS score was designated as the primary outcome, while the OAS score, medication adherence, quality of life, the proportions of patients committing violence and relapsing, and network members' knowledge and skills were secondary outcomes.

Inputs	Situation and problems of SMI-V care in Yang Talat District Department of Mental Health V-Care standard Related concepts and theories (integrated care, proactive prevention, systems theory, social learning, social support, case management)
Action research process (Plan-Act-Observe-Reflect)	Phase 1 Preparation (Oct-Dec 2025): planning; situation and problem analysis Phase 2 Implementation (Dec 2025-Jun 2026): acting; developing and piloting the YT-VCare Model (Jan-Apr 2026); observing and reflecting to refine the model over two cycles Phase 3 Evaluation and conclusion (Jun-Aug 2026)
Outcomes	Patients: BPRS (primary outcome), OAS, medication adherence, quality of life, relapse, and violence Network members: knowledge, skills, confidence, and satisfaction

Figure 1 Conceptual framework of the research

Research Objectives

1) To study the situation and problems in caring for patients with serious mental illness and substance use at high risk of violence (SMI-V) in Yang Talat District, Kalasin Province
2) To develop a care model for SMI-V patients in Yang Talat District, Kalasin Province
3) To evaluate the outcomes of the SMI-V care model in Yang Talat District, Kalasin Province, using a pre-specified primary outcome

Methods

This study was action research based on the Kemmis and McTaggart framework,[12] comprising four steps: planning, acting, observing, and reflecting, combined with a one-group pretest-posttest evaluation, as shown in Figure 1. Post-intervention outcomes were measured at one month (May 2026); follow-up at 3 and 6 months was not conducted owing to time constraints, which is a limitation of the study. The study was conducted in Ban Kham, Khlong Kham Subdistrict, and with health network partners in Yang Talat District, Kalasin Province, from 1 October 2025 to 31 August 2026 (11 months), with the model implemented among SMI-V patients from January to April 2026 (4 months). Details are as follows.

Population and Sample

Population comprised two groups: 1) SMI-V patients enrolled in the CBTX program in Ban Kham, Khlong Kham Subdistrict, Yang Talat District, Kalasin Province; and 2) health network members and registered nurses caring for psychiatric and substance use patients at risk of violence in Yang Talat District.

Sample comprised all 32 eligible SMI-V patients enrolled in the CBTX program in the area (census); therefore, no sample size calculation was performed (power = .78 for dz = 0.5 at α = .05). In addition, 45 health network members were purposively selected, including 12 registered nurses and health personnel from Yang Talat Hospital and subdistrict health promoting hospitals (SHPHs), 24 CBTX team members and village health volunteers (VHVs), and 9 representatives of subdistrict administrative organizations, the police station, and community leaders.

Inclusion criteria for patients were: 1) aged 18 years or older; 2) diagnosed with a psychiatric disorder or substance use disorder according to ICD-10 criteria and registered as an SMI-V patient using the Department of Mental Health's 10-domain risk assessment; 3) residing in Ban Kham for at least 6 months; 4) having a primary caregiver; and 5) consenting to participate. For network members: 1) working in SMI-V care for at least 6 months; and 2) consenting to participate.

Exclusion criteria were patients whose severe psychiatric symptoms prevented communication or providing information throughout the study, who relocated, were incarcerated, died, or withdrew, and network members attending less than 80.00% of activities. These criteria may cause the analysis to reflect only protocol-adherent participants (per-protocol) and overestimate benefits. In this study, all 32 patients and 45 network members completed all activities until the end of the study; thus, no participants were excluded or withdrew.

Research Instruments

Research instruments included 1) intervention tools: the SMI-V care model of Yang Talat District, the SMI-V care manual and practice guidelines, the Department of Mental Health's 10-domain risk assessment, and the network training plan; and 2) data collection tools: the Brief Psychiatric Rating Scale (BPRS) and Overt Aggression Scale (OAS), a demographic

questionnaire, the 10-item Medication Adherence Rating Scale (MARS; score 0-10), the 26-item Thai version of the WHO Quality of Life-BREF (WHOQOL-BREF-THAI; score 26-130), a 20-item network knowledge test, 5-point rating scales for risk assessment skills, crisis management skills, and practice confidence, a 5-point satisfaction scale, and a record form for treatment and violent incidents from medical records and the SMI-V registry. Six experts examined the content validity of the researcher-developed instruments, yielding an overall index of item-objective congruence (IOC) of 0.67-1.00. The BPRS,[13] OAS,[14] MARS,[15] and WHOQOL-BREF-THAI[16] are standardized, previously validated instruments. The knowledge test and the skill, confidence, and satisfaction scales were piloted with 30 workers similar to the network members in other areas of Yang Talat District, yielding reliability coefficients (KR-20 and Cronbach's alpha) of 0.82-0.91. For patient measures (MARS and WHOQOL-BREF-THAI), reliability values from the original studies were used.

Data Collection

Data collection followed the action research cycle in three phases:

Phase 1: Preparation (October-December 2025) The context and problems of SMI-V care were studied with the Yang Talat Hospital multidisciplinary team, network members, and patients through observation, inquiry, review of care processes and related research, and expert interviews. Ethics approval was sought, and a draft SMI-V care manual or practice guideline was prepared.

Phase 2: Implementation (December 2025-June 2026) Workshops were held with network members to develop a care model suited to the Yang Talat context; CBTX members, network members, and health personnel were trained; and the model was piloted with 32 SMI-V patients in Ban Kham from January to April 2026, with monthly home visits (4 visits in total), ongoing monitoring and evaluation (March-June 2026), and refinements as appropriate.

Phase 3: Evaluation and conclusion (June-August 2026) Model outcomes were evaluated in terms of quality of care, community safety, and service-user satisfaction, and results were analyzed and summarized by comparing outcomes before and after implementation.

Data were collected by the researcher and two research assistants (registered nurses trained in the instruments). Before data collection, the researcher and assistants rated the BPRS and OAS in 10 patients to assess inter-rater reliability, yielding an ICC for the BPRS of 0.846 (95% CI 1.94-3.41) and for the OAS of 0.742 (95% CI 1.89-2.56). Pre-intervention measurements were taken in December 2025-January 2026 and post-intervention measurements in May 2026. Relapse and violent incident data were compared between the 4 months before the intervention (September-December 2025) and the 4 months during the intervention (January-April 2026) using medical records and the SMI-V registry. Outcomes were defined as follows: good treatment adherence, taking medication as prescribed ≥ 80.00% based on the MARS score or dispensing records; committing violence, any incident of harm to others or property assessed by the OAS or recorded in the SMI-V registry; continuous

follow-up as required, follow-up according to the Department of Mental Health's V-Care guideline;[6] and relapse, symptom exacerbation requiring hospital admission. Six success indicators and criteria were pre-specified before the intervention: network knowledge (≥ 85.00%), model adherence (≥ 90.00%), satisfaction (≥ 90.00%), treatment adherence (≥ 80.00%), continuous follow-up (≥ 90.00%), and reduction in violent incidents (≥ 50.00%), based on Ministry of Public Health targets[3] and consensus between the research team and network members.

Data Analysis

Data analysis: General data were analyzed using frequency, percentage, mean, and standard deviation (S.D.). Assumptions were checked with the Shapiro-Wilk test of differences. Pre-post mean scores were compared using the paired t-test, reporting mean differences, 95% CI, and Hedges' g (with the Wilcoxon signed-rank test as a sensitivity analysis, particularly for the OAS and 5-point scales). Pre-post proportions were compared using the exact McNemar's test, reporting differences in proportions with 95% CI, and p-values were adjusted using the Holm method. The primary outcome (BPRS) was pre-specified, with two-sided tests at α = .05. Qualitative data from workshops and reflections were analyzed by content analysis.

Research Ethics

This study adhered to human research ethics. Data collection from patients and network members began only after ethics approval. Activities in October-November 2025 consisted of reviewing documents and de-identified registry data, while observation, inquiry, and expert interviews in Phase 1 were conducted after approval. The researcher explained the objectives, procedures, benefits, and risks to participants and caregivers, who signed voluntary informed consent. Data were kept confidential using codes instead of names and presented in aggregate, and participants could withdraw at any time without affecting their treatment. Before enrollment, a psychiatric nurse assessed each patient's capacity to consent; patients participated when their symptoms were stable and they could understand the study information. If a patient could not consent, consent was obtained from a legally authorized representative (the primary caregiver) together with the patient's assent. For violent incidents involving the police or the community, data were used without identifying individuals and disclosed only as necessary for safety or as required by law. When a high risk of harm to self or others was identified, the researcher followed the individual crisis management plan, notified the physician and caregiver, and referred the patient within 48 hours, prioritizing the safety of the patient and others.

Results

1. Situation and problems of SMI-V care (Objective 1)

1.1 General characteristics of the sample Of the 32 SMI-V patients, most were male (68.75%), with a mean age of 35.19 ± 8.46 years (range 19-54), and methamphetamine (yaba) was the most commonly used substance (75.00%). Of

the 45 health network members, most were CBTX team members and VHVs (53.33%), as shown in Table 1.

Table 1 General characteristics of SMI-V patients (n = 32) and health network members (n = 45)

Characteristic	n (%) or $\bar{x}$ ± S.D. (min-max)
SMI-V patients (n = 32)	
Male	22 (68.75)
Female	10 (31.25)
Age (years)	35.19 ± 8.46 (19-54)
Diagnosis: schizophrenia with substance use	17 (53.13)
Diagnosis: substance-induced psychosis	9 (28.13)
Diagnosis: bipolar disorder with history of substance use	6 (18.75)
Most used substance: methamphetamine (yaba)	24 (75.00)
Substance used: crystal methamphetamine (ice)	5 (15.63)
Substance used: cannabis	3 (9.38)
Risk factor: unemployed or no regular income	21 (65.63)
Risk factor: lack of family support	19 (59.38)
Risk factor: history of violent behavior	14 (43.75)
Risk factor: history of drug-related arrest	12 (37.50)
Health network members (n = 45)	
Registered nurses and health personnel	12 (26.67)
CBTX team and village health volunteers (VHVs)	24 (53.33)
Subdistrict administrative organization, police, and community leaders	9 (20.00)

1.2 Situation and problems of SMI-V care

Situation analysis with the multidisciplinary team, network members, and patients identified problems in four domains: 1) Personnel: registered nurses and health personnel lacked specialized knowledge and skills in systematic risk assessment and management of violent behavior, lacked confidence, and had heavy workloads, making follow-up discontinuous and incomplete. 2) Organization: the hospital lacked clear standard guidelines; referral and coordination between the hospital and the community were ineffective; there was no monitoring and evaluation mechanism; and there was no linked database for patient surveillance. 3) Community workers: VHVs and CBTX teams lacked knowledge for caring for complex patients and skills in initial

assessment and emergency management, had no tools or guidelines, and were concerned for their own safety. 4) Network and community: coordination among the hospital, subdistrict administrative organizations, the police station, and community leaders was discontinuous, roles were unclear, there was no mechanism for communication and information sharing, and the community held negative attitudes and stigma toward patients. These data were obtained from focus groups with the 45 network members (3 groups by profession), together with observation, inquiry into work practices, and review of SMI-V registry data, and were analyzed by content analysis, with the researcher and assistant analyzing independently and then reaching consensus.

2. Development of the SMI-V care model (Objective 2)

2.1 Components of the SMI-V care model Two one-day workshops with network members and two cycles of reflection within the action research cycle yielded the Yang Talat SMI-V care model (YT-VCare Model), consisting of five main components: community surveillance and risk assessment; capacity building for the CBTX team and network members; rapid referral and crisis management; case management with continuous home visits; and building understanding and reducing stigma in the community, as shown in Table 2.

Table 2 Components, summary of activities, and duration of the Yang Talat SMI-V care model (YT-VCare Model)

Component	Summary of activities	Duration
1. Community surveillance and risk assessment	Screening and individual registration of SMI-V patients; risk assessment using the Department of Mental Health's 10-domain tool, BPRS, and OAS; monthly monitoring of warning signs by CBTX members and VHVs, recorded in a shared network database	Throughout the project (Jan-Apr 2026)
2. Capacity building for the CBTX team and network members	Workshop training on basic risk assessment, recognition of warning signs, de-escalation techniques, emergency management, and worker safety	2 days (12 hours)
3. Rapid referral and crisis management	Establishing coordination channels among the community, SHPHs, the hospital, subdistrict administrative organizations, and the police station; defining clear roles; developing individual crisis plans; and referring patients within 48 hours when high risk is identified	Throughout the project

Component	Summary of activities	Duration
4. Case management with continuous home visits	A nurse case manager develops individual care plans, conducts monthly home visits, monitors medication intake, dispenses medication in the community, educates patients and families, and promotes emotion-management skills	4 visits, 60 minutes each
5. Building understanding and reducing stigma in the community	Educating community leaders and residents about psychiatric and substance use disorders, establishing family and community support groups, and linking patients with occupational groups and community activities	Every 2 months (2 sessions)

2.2 Appropriateness of the model

Five experts (one psychiatrist, two psychiatric nurses, one representative of the Provincial Public Health Office, and one community leader) assessed the model as consistent with its objectives (IOC of the model and manual = 0.80-1.00) and highly appropriate and feasible (mean = 4.48, S.D. = 0.36). They suggested adding a LINE coordination group and individual crisis management plans, which the researcher incorporated before implementation.

3. Evaluation of the SMI-V care model (Objective 3)

3.1 Outcomes for psychiatric symptoms, aggressive behavior, medication adherence, and quality of life After implementation, the 32 SMI-V patients had significantly lower psychiatric symptom (BPRS) and aggressive behavior (OAS) scores and significantly higher medication adherence and quality of life scores than before ($p < .001$). The BPRS score decreased by a mean of 14.22 points (95% CI 11.55-16.89; Hedges' g = 1.87), as shown in Table 3.

Table 3 Comparison of mean scores for psychiatric symptoms, aggressive behavior, medication adherence, and quality of life of SMI-V patients before and after implementation (n = 32)

Variable	Score range	Before $\bar{x}$ (S.D.)	After $\bar{x}$ (S.D.)	Difference (95% CI)	Hedges' g	t	p-value
Psychiatric symptoms (BPRS)	18-126	41.56 (8.73)	27.34 (6.12)	14.22 (11.55-16.89)	1.87	10.87	< .001*
Aggressive behavior (OAS)	0-56	9.84 (4.21)	3.47 (2.58)	6.37 (5.05-7.69)	1.70	9.87	< .001*
Medication adherence (MARS)	0-10	5.38 (1.74)	7.91 (1.32)	2.53 (1.92-3.14)	1.46	8.47	< .001*
Quality of life (WHOQOL-BREF-THAI)	26-130	77.94 (9.85)	91.28 (8.62)	13.34 (10.13-16.55)	1.46	8.48	< .001*

Note: *Statistically significant at p < .05

3.2 Outcomes for network members' knowledge, skills, and satisfaction After participating, the 45 network members had significantly higher scores for knowledge, risk assessment skills, crisis management skills, and practice confidence than before (p < .001), as shown in Table 4, which also presents mean differences (95% CI) and Hedges' g. Sensitivity analysis using the Wilcoxon signed-rank test yielded the same conclusions. Satisfaction with the model was high to very high (mean = 4.52, S.D. = 0.48; 95% CI 4.38-4.66), with 42 members (93.33%; 95% CI 82.1-97.7) satisfied at a high level or above; this 95% CI includes the pre-specified 90.00% criterion.

Table 4 Comparison of mean knowledge, skill, and confidence scores of network members before and after implementation (n = 45)

Variable	Before $\bar{x}$ (S.D.)	After $\bar{x}$ (S.D.)	Difference (95% CI)	Hedges' g	t	p-value
Knowledge of SMI-V care (maximum 20)	11.38 (2.74)	16.87 (1.96)	5.49 (4.69-6.29)	2.04	13.90	< .001*
Risk assessment skills (maximum 5)	2.84 (0.62)	4.21 (0.47)	1.37 (1.20-1.54)	2.45	16.71	< .001*
Crisis management skills (maximum 5)	2.71 (0.66)	4.12 (0.51)	1.41 (1.23-1.59)	2.31	15.76	< .001*
Practice confidence (maximum 5)	2.93 (0.71)	4.17 (0.54)	1.24 (1.04-1.44)	1.79	12.23	< .001*

Note: *Statistically significant at p < .05

3.3 Outcomes for treatment adherence, continuous follow-up, relapse, and violent incidents The proportions of patients with good treatment adherence and continuous follow-up as required increased, whereas the proportions of patients with relapse requiring hospitalization and those committing violence in the community decreased (exact McNemar p = .031 for both; Holm-adjusted p = .063, not significant at .05, and therefore reported as exploratory), as shown in Table 5. Violent incidents decreased from 9 to 2 over 4 months (a 77.78% reduction; exact conditional test p = .065, not significant). Compared with the success indicators, all six values numerically exceeded the criteria: 39 network members (86.67%) met the knowledge criterion (≥ 80.00% of the total score; criterion ≥ 85.00%), 41 (91.11%) adhered correctly to the model (criterion ≥ 90.00%), satisfaction was 93.33% (criterion ≥ 90.00%), patient treatment adherence was 84.38% (criterion ≥ 80.00%), continuous follow-up was 93.75% (criterion ≥ 90.00%), and violent incidents decreased by 77.78% (criterion ≥ 50.00%). However, the 95% CIs (Wilson) included the criteria for all indicators; therefore, it cannot be concluded that the criteria were met.

Table 5 Comparison of the number and percentage of SMI-V patients before and after implementation by treatment and safety outcomes (n = 32)

Outcome/status	Before n (%)	After n (%)	Pairs improved/ worsened (b/c)	p-value	Difference in proportion (95% CI)
Good treatment adherence (regular medication ≥ 80.00%)	13 (40.63)	27 (84.38)	14/0	.0001*	43.75 (26.6-60.9)
Continuous follow-up as required	17 (53.13)	30 (93.75)	13/0	.0002*	40.63 (23.6-57.6)
Relapse requiring hospitalization	8 (25.00)	2 (6.25)	6/0	.031*	-18.75 (-32.3 to -5.2)
Committing violence in the community	7 (21.88)	1 (3.13)	6/0	.031*	-18.75 (-32.3 to -5.2)

Note: *Statistically significant at p < .05

Discussion

The situation analysis showed that problems in SMI-V care in Yang Talat District arose at multiple levels, including personnel, organizations, community workers, and network partners, consistent with a study reporting that barriers to community mental health services for this group include negative attitudes, staff shortages, and insufficient budgets.[11] The sample characteristics, predominantly male, under 40 years, methamphetamine users, and unemployed, are consistent with risk factors for violent behavior in patients with schizophrenia.[17] The yearly increase in medication discontinuation and delayed services indicates that hospital-centered follow-up is insufficient and that a surveillance and referral system linked to the community is needed.

The YT-VCare Model was developed through an action research process in which network partners participated from problem analysis and design to reflection, consistent with the network-participatory care model for high-risk psychiatric patients in Don Tan District, Mukdahan Province,[10] which reported that network participation fostered sustainable implementation. The model's components are consistent with the concept of integrated care linking multiple levels of services.[7] An integrated community SMI-V care model in Patong Subdistrict, Songkhla Province (71 patients) significantly increased medication adherence and reduced aggressive behavior.[18] In addition, participatory community case management in Mueang District, Sakon Nakhon Province (34 patients) reduced psychiatric symptom scores and improved global functioning,[19] consistent with the case management and home visit component of the YT-VCare Model. Training CBTX teams to recognize warning signs and use de-escalation techniques is consistent with key components of de-escalation that reduce aggression without restrictive measures.[20] However, these studies differ in context, sample

size, and outcomes, so the comparisons indicate only trends.

After implementation, patients' psychiatric symptoms and aggressive behavior decreased, and medication adherence and quality of life increased significantly, consistent with the network-participatory model in which 88.40% of patients had reduced psychiatric symptom scores,[10] and with Bandura's social learning theory, which explains that aggressive behavior is learned and modifiable.[8] Improved treatment adherence may be related to social support from families and community networks (social support was not directly measured in this study), in line with Cobb's social support theory, which holds that social support buffers the effects of stress.[9] The reductions in patients committing violence and relapsing (21.88% to 3.13% and 25.00% to 6.25%; exact McNemar p = .031 for both, but Holm-adjusted p = .063) are consistent with a report of continuous community care in which no relapse occurred after discharge.[18] Network members' knowledge, skills, and confidence increased, which may have helped the surveillance and referral system to function continuously.

Limitations This was a one-group pretest-posttest study without a comparison group; therefore, the influence of other factors cannot be ruled out. The sample was small and from a single area, the follow-up period was short (4 months), some data were reported by caregivers and staff, and statistical tests for variables with small counts may be imprecise. In addition, (1) post-intervention measurement was conducted at only one month, and relapse and violence data covered a different period from the score measurements; (2) the researcher was both care provider and assessor without blinding to the pre-post period, and substance use was not verified by urine testing or the ASSIST; (3) the two safety outcomes (relapse and violence) were not significant after Holm adjustment, and the 95% CIs of all success indicators included the criteria; (4) effect sizes were unusually large (dz approximately 1.5-2.5), warranting caution regarding measurement bias and regression to the mean; and (5) the network comprised three professional groups that were not analyzed separately, and patients came from a single village. The results should therefore be interpreted and applied with caution.

Conclusion

This action research produced the Yang Talat SMI-V care model (YT-VCare Model) with five components (Table 2). After 4 months of implementation, patients' psychiatric symptoms (BPRS decreased by 14.22 points) and aggressive behavior decreased, and treatment adherence and continuous follow-up increased. Relapse and community violence decreased numerically but were not significant after Holm adjustment. Network members' knowledge and skills increased, and their satisfaction was high to very high. Given the one-group pretest-posttest design without a comparison group, causality cannot be concluded, and the 95% CIs of all six success indicators included the criteria.

Recommendations

1. Recommendations for applying the findings This model should be adopted as

hospital- and district-level policy and guidelines for SMI-V care, supported by budget and personnel resources, continuous training for staff and CBTX members, a linked database among network partners, guidance materials for patients, families, and communities, and efforts to build community understanding and acceptance of patients. The model should also be extended to other subdistricts of Yang Talat District and to areas with similar contexts.

2. Recommendations for future research

Future studies should use a comparison group (quasi-experimental or stepped-wedge design) with larger, multi-site samples, conduct long-term follow-up of at least 12 months, and analyze the cost-effectiveness of the model.

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