

Effect of Self-Management Program on Interpersonal Competencies and Ways of Coping among Patients with Schizophrenia

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Abstract

Background: The implementation of a structured self-management program for patients with schizophrenia demonstrates significant potential for improving key psychosocial domains essential for recovery and community integration. **Aim of the study:** This study aimed to examine effect of self-management program on interpersonal competencies and ways of copying among schizophrenic patients. **Design:** A quasi-experimental pre-post design was used. **Sample:** a purposive of 30 schizophrenic inpatients at Al Abbasia Hospital for Mental Health participated in a 14-session intervention program. **Tools for data collection:** Data were collected using the Interpersonal Competence Questionnaire (ICQ) and the Ways of Coping Questionnaire (WCQ). **Results:** it revealed significant improvements in self-disclosure capabilities ($p = .008$) and coping skills, particularly in active coping ($p = .032$) and minimization strategies ($p = .009$). The percentage of participants with high-level active coping increased from 10% to 33.3%, and those with high-level overall coping skills increased from 3.3% to 23.3%. While total interpersonal competencies showed non-significant improvement ($p = .112$), the program demonstrated very large effect sizes for both interpersonal competencies (32.5) and coping skills (5.1). **Conclusion:** These findings suggest that structured self-management programs can effectively enhance adaptive coping mechanisms and specific interpersonal skills among schizophrenic patients, with potential implications for clinical practice in psychiatric rehabilitation. **Recommendations:** replicate the study using large sample size and control group to generalize the results.

Keywords: schizophrenia, self-management, interpersonal competencies, coping skills, psychiatric rehabilitation

Introduction

Schizophrenia is a serious mental disorder affecting more than 21 million people worldwide, often resulting in permanent disability and impairment of cognitive, social and emotional functioning (WHO, 2022). Schizophrenia, characterized by disturbances of thinking, perception, emotion and behaviour, has a profound impact on the psychosocial functioning and quality of life. Schizophrenic patients often have difficulty in interpersonal relations and use maladaptive coping strategies to cope with stress (McCutcheon, Reis Marques, Howes, 2020).

Interpersonal competences, defined as the skills required to interact effectively with others, including communication, empathy and solving social problems, are particularly affected in patients with schizophrenia (Green et al., 2022). Similarly, coping strategies, which refer to cognitive and behavioural efforts to cope with stressful situations, are less effective in schizophrenia than in the general

population (Wu et al, 2020). Both areas are critical objectives for intervention, as improvements in these areas are associated with improved functional results and a reduction in recidivism (Piotrowski et al., 2020).

Interpersonal competency is a major contributing factor and an essential part of daily life in schizophrenia patients, with significant effects on the functional outcomes of the patients in society (Vogel et al., 2018). Successful interpersonal skills and social interaction require a complex set of skills, including general cognitive skills, appropriate facial expressions and emotional recognition (Van Kleef & Cote, 2021).

Patients with schizophrenia are prone to avoidance and emotional distraction (Piotrowski et al., 2020), and, as with other psychopathological disorders, experimental avoidance leads to increased psychotic experiences (Forman et al., 2021). However, coping strategies that focus on addressing the

stress without avoiding it, rather than on how to overcome it, have been associated with a reduction in the impact of psychotic experiences on well-being (**Lopez-Navarro et al., 2018**), improved social functioning (**Karas et al., 2021**) and reduced stigma-related effects on recovery (**Ordonez-Cambor et al., 2021**).

While pharmacological interventions remain the cornerstone of schizophrenia treatment, there is growing recognition of the importance of psychosocial interventions to address the functional impairments associated with the disorder (**Such, et al., 2021**). Self-management programs, which empower patients to actively participate in their recovery process, have shown promising results in various chronic conditions but remain understudied in the context of schizophrenia (**Martin, et al., 2020**).

Self-management in schizophrenia generally includes a set of activities to manage mental health problems, including adherence to medication, management of symptoms, maintenance of daily life and social functioning, and referral to professional and other support services (**Van Schaike et al., 2018**). **Involving schizophrenic patients in their own management** is a major challenge for mental health care. Several studies have shown that the effectiveness of self-management interventions in schizophrenia and major mental illness is inconsistent with variables relating to recidivism and readmission (**Lean et al., 2019**).

Self-management has been applied in a variety of health-related fields. It includes various aspects such as adherence to medication, changes in lifestyle and social support. Self-management offers additional options to help depressed patients to maintain stability while reducing the risk of mental decline (**Reynolds, et al., 2020**).

The key components of self-help include psychological education, relapse prevention, identifying and avoiding stressors, developing effective coping strategies, and often include a component of self-reintegration. There is now strong meta-analytic evidence that providing support for self-management programmes in combination with standard care improves outcomes in people with severe mental health

problems, including a marked reduction in the severity of symptoms, shorter hospital stays, and improved functioning and quality of life (**Lean, et al., 2019**).

Self-management in schizophrenia involves a range of goal-directed and effort-directed activities which are relatively difficult to integrate into daily life and motivation is the driving force that induces and maintains these behaviours (**Reynolds, et al., 2020**).

By examining changes in these two crucial domains (interpersonal competences and ways of coping), this research seeks to contribute to the growing body of evidence supporting psychosocial interventions in schizophrenia management and potentially inform the development of more effective rehabilitation programs for schizophrenic patients.

Significance of the Study

Schizophrenia is a mental disorder which has a significant negative impact on the social life of the patient. It also leads to considerable personal anguish. In addition to the burden on hospitals, carers and society suffer significant immediate and long-term consequences, such as long-term psychosocial and economic support, frequent hospitalization and loss of productivity throughout the life span of patients (**Aubeeluk, and Luximon-Ramma, 2020**).

Patients with schizophrenia have deficits in cognitive, perceptual, motor and emotional functioning, and the primary diagnostic criteria for schizophrenia as described in the DSM-5 (**American Psychiatric Association, 2019**). Previous research on self-help interventions in schizophrenia has shown mixed results, with differences in the structure of the programmes, delivery methods and measures of outcomes contributing to inconsistent results (**Souto, et al., 2021**). **Higgins and Green (2019)** found that self-help programmes with peer support components and recovery-oriented outcomes were more effective than those that focused only on symptom management. However, few studies have specifically explored how these programs affect interpersonal functioning and coping mechanisms at the same time, which is a major gap in the literature (**Sheffler et al., 2019**).

Therefore, this study is expected to have beneficial effects on practice, increasing the unit of knowledge related to psychiatric and mental disciplines in general and for nurses in particular, in terms of the concepts covered. This study will therefore highlight the importance and potential benefits for schizophrenic patients of implementing a self-management programme to improve their interpersonal skills and coping methods.

Aim of the study

The purpose of this study is to examine effect of self-management program on interpersonal competencies and ways of coping among schizophrenic patients

Research hypothesis:

- 1- Schizophrenic patients who are attended self-management program will have higher scores in interpersonal competencies post program than pre-program.
- 2- Schizophrenic patients who are attended self-management program will have higher scores in ways of coping post program than pre-program.

Research design

A quasi-experimental design was selected for the current study, pre-post design.

Sample

In the present investigation, a purposive sampling approach was employed. The sample comprised 30 participants, with this sample size determined through power analysis utilizing G-power version 3.1.1. The analysis parameters included a power of .95 ($\beta = .05$), a significance level of .05 (one-sided alpha), and an effect size of .05.

Patients were recruited according to inclusion criteria:

- Age: 30-60year.
- Both gender
- Can read and write
- Chronicity more than three years
- More than two times of hospitalization, and hospitalized for at least 2 weeks in the current time.

Exclusion Criteria

- Patients who have mental retardation, addiction, neurological disorder (epilepsy, dementia, delirium) were excluded from the study sample.

Setting

The study was conducted in the psychiatric wards of the Al Abbasia Mental Hospital in Cairo, which serves both rural and urban areas. There are 1474 beds in 36 in-patients wards with a total of 5483 patients receiving care in both in-patient departments and outpatient clinics. The hospital employs 188 psychiatrists, 21 psychologists, 67 social workers, 16 general practitioners, four internists and 656 nurses.

Ethical Consideration

Written permission to carry out the proposed study has been obtained from the director of the Al-Abbasia Psychiatric Hospital. All participants were informed of the purpose and nature of the study and that participation in the study was completely voluntary, informed consent was obtained, data encryption was ensured (data were used for research purposes only), all participants had the right to withdraw without giving a reason, and the participants were informed that the data would be used for research purposes only.

Tools

Data were collected using the Socio-demographic Data Sheet, the Interpersonal Competence Questionnaire (ICQ) and The Ways of Coping Questionnaire (WCQ).

- 1- **Socio-demographic and Medical Data Sheet:** It was designed by the researchers and it includes personal data, such as patient's name, age, and gender, level of education, marital status, occupation, and place of residence. It also includes queries about number of previous admissions into mental hospital, and type of management
- 2- **Interpersonal Competence Questionnaire (ICQ):** It was developed by Buhrmester, Furman, Wittenberg and Reis (1988) for the assessment of interpersonal competences. It contains 40 items, divided into 5 sub-scales: a) Initiation, which is the initiation and development of interaction and relations with other persons, contains 8

items. b) Negative statement referring to assertion of personal rights and resentment towards others, contains 8 items. c) Disclosure, which refers to the disclosure of personal data, contains 8 items. d) providing emotional support, meaning providing comfort to others when they are in difficulty or distress, contains 8 items. e) Conflict management, which refers to the resolution of interpersonal conflicts arising in close relations, contains 8 items. The original ICQ item scale was a four-point rating scale according to the Likert criteria (1) = poor for this, (2)= fair for this, (3)= good for this, and (4)= very good for this. In this study, the ICQ rating was adjusted to three Likerts, meaning (1) = poor for this, (2) = good for this, and (3) = very good for this. The high average score on the Global Measure or any sub-score on the ICQ reflects greater self-assessment of competence in dealing with interpersonal situations. The internal consistency of the individual scales (Cronbach's alpha) was satisfactory, ranging from .77 to .87 in the original version (Buhrmester and colleagues, 1988)

- 3- The Ways of Coping Questionnaire (WCQ):** Smyth and Yarandi (1991) developed the scale. It was designed to assess patients' thoughts and actions when faced with stressful social events. It is composed of 35 items divided into three sub-scales. The first sub-scale includes 15 items on active coping, these items describe aggressive efforts to change the situation, for example, I have made a plan of action and I am executing it. The second sub-scale is made up of 10 items reflecting avoidance coping, these items describe wishful thinking and efforts to escape or avoid a problem situation, for example, having a fantasy or wish for how things would turn out. The third sub-scale contains 10 items representing the minimum situation. It describes the effort to get out of a difficult

situation and includes the words, 'Went on as if nothing had happened' and 'In the original scale, responses were measured using a four-point Likert scale with response options not used at all (1), slightly used (2), slightly used slightly (3) and extensively used (4). In this study, the WCQ rating was changed to a three-point Likert scale, which was either not used or not used at all (1), slightly used (2) or always used (3). A high score indicates a greater use of this particular coping strategy. The scale was translated and tested for its content validity by Younis (2004).

Self-management program

The program consists of 14 sessions (30min.- 45min. for each session). This 14-session intervention program is designed to support individuals with schizophrenia in developing comprehensive self-management skills, focusing on improving interpersonal competencies, coping mechanisms, and overall quality of life. These 14 sessions will follow one introductory session including explaining the aim and the objectives of the program, its benefits, and collecting the baseline assessment for the selected research tools. And the program will be followed with one evaluative session to evaluate the effectiveness of the program from participants' point of view.

Program Objectives

- Enhance interpersonal communication skills
- Develop effective coping strategies
- Improve emotional regulation
- Increase social functioning
- Promote medication adherence
- Build self-awareness and resilience

Theoretical Framework

The program integrates principles from:

- Cognitive Behavioral Therapy (CBT)
- Social Skills Training
- Psychoeducational Approaches
- Mindfulness-Based Interventions

Session No	Title of session	Objectives	Activities
1 st	Program Introduction and Self-Awareness	Establish group rapport -Introduce program goals -Conduct initial assessment -Develop individual baseline understanding	-Introductory group discussion -Self-assessment questionnaire -Goal-setting exercise
2 nd	Psychoeducation about schizophrenia	Provide comprehensive understanding of schizophrenia -Identify individual symptom patterns -Develop personal symptom management strategies	Psychoeducational presentation -Symptom tracking worksheet -Coping strategy brainstorming -Individual symptom management plan development
3 rd	Medication Management and Adherence	-Enhance medication understanding -Address medication-related concerns -Develop adherence strategies	-Medication education role play -Side effect management discussion -Adherence strategy development
4 th	Cognitive Restructuring and Thought Management	-Identify negative thought patterns -Learn cognitive restructuring techniques -Develop alternative thinking strategies	-Cognitive distortion identification exercise -Thought challenging techniques -Cognitive reframing practice -Mindfulness-based thought observation
5 th	Emotional Regulation Skills	-Recognize emotional triggers -Develop emotional regulation strategies -Practice stress management techniques	-Emotional awareness assessment -Stress reduction techniques training -Mindfulness and relaxation exercises -Emotion tracking and management plan
6 th	Communication Skills Development	-Improve verbal and non-verbal communication -Enhance active listening skills -Develop assertiveness techniques	-Communication skills workshop -Role-playing exercises -Active listening practice -Assertiveness training
7 th	Social Skills Enhancement	-Improve social interaction skills -Reduce social anxiety -Build confidence in social settings	-Social skills training -Conversation practice -Non-verbal communication -Social scenario role-playing
8 th	Relationship Management	-Understand healthy relationship dynamics -Develop boundaries -Improve interpersonal relationships	- Discussion of relationship boundaries -Conflict resolution strategies -Healthy communication practice
9 th	Stress Management and Resilience Building	-Identify stress triggers -Develop comprehensive coping strategies -Build psychological resilience	-Stress assessment -Coping mechanism development -Resilience-building exercises -Stress reduction technique training
10 th	Goal Setting and Future Planning	-Develop personal and professional goals -Create actionable plans -Enhance motivation and self-efficacy	-Goal-setting activities -Personal vision board creation -Action plan development -Motivation enhancement techniques
11 th	Relapse Prevention	-Identify potential relapse triggers -Develop prevention strategies -Create comprehensive relapse management plan	-Trigger identification exercise -Relapse prevention planning -Early warning sign recognition -Support system development
12 th	Lifestyle Management	-Promote holistic health -Develop healthy lifestyle habits -Integrate wellness strategies	-Nutrition and exercise activities -Sleep hygiene education -Healthy routine development -Wellness goal setting
13 th	Support Resources	-Explore community resources -Develop independent support strategies	-Resource mapping -Support network development
14 th	Program Conclusion and Future Planning	Review program progress -Celebrate achievements -Develop ongoing self-management strategy -Conduct final assessment	-Individual and group progress review -Achievement recognition -Long-term management plan creation -Final assessment and goal evaluation

Procedure

Before initiating the study, a comprehensive review of relevant literature was conducted to establish the significance of the research and gain insights into current findings. The self-management program and study tools were reviewed by a panel of three experts in psychiatric nursing to ensure content validity. Participants were recruited based on predefined inclusion and exclusion criteria. The study procedure consisted of three main phases: assessment, implementation, and evaluation. The program was carried out from April 2019 to December 2019.

Assessment Phase

During the initial session, the researchers introduced themselves to participants and explained the objectives, significance, and structure of the self-management program. Participants were also informed about the location, timing, and content of the sessions. Written informed consent was obtained from all participants, ensuring confidentiality and the voluntary nature of participation. Baseline assessments were conducted before the intervention using the selected research tools, including the Interpersonal Competence Questionnaire (ICQ) and the Ways of Coping Questionnaire (WCQ).

Implementation Phase

The intervention consisted of 14 structured sessions designed to enhance interpersonal competencies and coping strategies among patients with schizophrenia. The researchers explained the aim of the study, meeting time was twice per week from (11.00 am – to 11: 30/45 am), the program sessions were held in the activity room at the in-patient male department. The program included psychoeducational components, skills training, and cognitive-behavioral strategies. The sessions covered various aspects such as symptom management, medication adherence, emotional regulation, social skills training, and stress management. Teaching strategies included PowerPoint presentations, group discussions, role-playing exercises, and distribution of self-help booklets.

- **Sessions 1–2:** Introduction, psychoeducation about schizophrenia, and symptom management strategies.
- **Sessions 3–4:** Medication adherence and cognitive restructuring techniques.
- **Sessions 5–7:** Emotional regulation, communication skills, and social skills enhancement.
- **Sessions 8–10:** Relationship management, stress management, and future planning.
- **Sessions 11–12:** Relapse prevention and lifestyle management.
- **Sessions 13–14:** Community support resources and program conclusion.

Participants actively engaged in group discussions, problem-solving exercises, and practical demonstrations. The researcher provided feedback and reinforcement to enhance skill acquisition.

Evaluation Phase

The effectiveness of the intervention was assessed in the final session using the same research tools administered in the baseline assessment. Post-intervention scores on the ICQ and WCQ were compared to pre-intervention scores to determine improvements in interpersonal competencies and coping strategies.

Statistical design

For statistical analysis of data, the Statistical Package for Social Sciences (SPSS) version 20 was used, as it contains the significance testing provided in the standard statistical textbooks. The collected data were summarized and tabulated using descriptive statistics. Parametric inferential statistics (paired T-test) were used to investigate the statistical differences between study variables, with a significance level of $P (<.05)$.

Results

The results of the current study reveals that, the mean age of the study group was (51.40± 12.29), more than half of them (63.3%) their age 50 years and more, about (83%) of the studied patients from urban area compared to 17% from rural area, and about two third (67%) of the studied sample were work, moreover

(40%) of them have secondary level education, and (40%) can read and write, and only 10 % finished higher education, as regards marital status the study results shows that, (46.7%, 40%) were married, and single respectively, and only (13.3%) were divorced. Moreover the study results reveals that, (70%, 23.3, 6.7%) of the studied patients their duration of illness less than 10 years, 10 years to less than 20 years, and 20 years and more respectively.

Table (1) revealed that, frequency distribution reveals notable shifts in interpersonal competencies across multiple subscales. Most striking are the improvements in self-disclosure and conflict management domains. The percentage of participants with low-level self-disclosure decreased from 30% to 6.7%, while those in the fair category increased from 63.3% to 80%. Similarly, conflict management showed a substantial reduction in low-level performance from 33.3% to 10%, with the fair category expanding to 80%. The total interpersonal competencies demonstrated a positive trend, with low-level performance declining from 30% to 13.3% and high-level performance increasing from 3.3% to 10%, suggesting the intervention's potential effectiveness in enhancing interpersonal skills.

As showed in table (2) paired t-test results illuminate nuanced changes in interpersonal competencies. The self-disclosure subscale emerged as the most statistically significant improvement ($t = -2.856$, $p = .008$), with mean scores increasing from 16.6 ± 3.32 to 19.56 ± 4.19 . Other subscales showed modest, yet non-significant improvements, including initiation ($t = -1.24$, $p = .226$) and provision of emotion ($t = -1.578$, $p = .125$). The total interpersonal competencies scale exhibited a marginal, non-significant increase from 88.6 ± 15.9 to 96.23 ± 16.25 ($p = .112$), indicating potential clinical relevance despite the lack of statistical significance.

Moreover, table (3) reported that pre- and post-intervention distribution of coping skills demonstrates substantial improvements across subscales. The active coping category showed a notable transformation, with high-level

performers increasing from 10% to 33.3%. The minimize coping strategy experienced a significant reduction in low-level performance from 36.7% to 13.3%. The avoidance coping category also showed improvement, with low-level performers decreasing from 16.7% to 3.3%. The total coping skills scale revealed a dramatic shift, with the high-level category expanding from 3.3% to 23.3%, suggesting the intervention's positive impact on participants' coping mechanisms.

As regards the effect of intervention on the coping skills table (4) revealed that, significant improvements in multiple domains. The active coping subscale demonstrated a statistically significant change ($t = 2.25$, $p = .032$), while the minimize coping strategy showed an even more pronounced improvement ($t = 2.781$, $p = .009$). In contrast, the avoidance coping subscale did not show statistically significant changes ($t = 0.83$, $p = .412$). The total coping skills scale exhibited a statistically significant enhancement ($t = 2.581$, $p = .015$), with mean scores increasing from 13.88 ± 2.51 to 14.63 ± 2.62 , indicating the intervention's effectiveness in improving participants' coping strategies.

Table (5) highlights the intervention's overall impact on interpersonal competencies and coping skills. While the interpersonal competencies showed a non-significant change (paired t-test = 1.637, $p = .112$), the coping skills demonstrated a statistically significant improvement (paired t-test = 2.56, $p = .016$). The mean scores for interpersonal competencies decreased from 96.23 ± 2.96 to 88.60 ± 2.90 , whereas coping skills increased from 13.88 ± 2.51 to 14.63 ± 2.62 . These findings suggest the intervention's differential effects on various psychosocial domains, with a more pronounced impact on coping strategies.

In relation to the practical significance of the intervention program table (6) revealed that there is a very large effect sizes for both interpersonal competencies as well as coping skills since the effect sizes are larger than 1.3. This indicates the large effect or impact of the training program which is reflected on the large relative difference between pre and post means.

Table (1): Interpersonal competencies among the studied sample at pre and post self-management program (n=30)

Subscale		Pre-program		Post-program	
		No	%	No	%
Initiation	Low	10	33.3	6	20
	Fair	17	56.7	17	56.7
	High	3	10	7	23.3
Negative assertion	Low	7	23.3	5	16.7
	Fair	17	56.7	21	70
	High	6	20	4	13.3
Self-disclosure	Low	9	30	2	6.7
	Fair	19	63.3	24	80
	High	2	6.7	4	13.3
Provision of emotion	Low	10	33.3	8	26.7
	Fair	17	56.7	14	46.7
	High	3	10	8	26.7
Conflict management	Low	10	33.3	3	10
	Fair	17	56.7	24	80
	High	3	10	3	10
Total interpersonal competencies	Low	9	30	4	13.3
	Fair	20	66.7	23	76.7
	High	1	3.3	3	10

Table (2): Interpersonal competencies among the studied sample at pre and post self-management program (n=30)

Interpersonal competencies subscale	Pre/ post program	M± SD	Paired-T test	P-value
Initiation	Pre	18.4 ± 4.73	-1.24	0.226
	Post	19.83 ± 4.64		
Negative assertion	Pre	18.26 ± 4.32	-0.359	0.722
	Post	18.7 ± 3.94		
Self-disclosure	Pre	16.6 ± 3.32	-2.856	0.008*
	Post	19.56 ± 4.19		
Provision of emotion	Pre	17.4 ± 4.22	-1.578	0.125
	Post	19.3 ± 4.76		
Conflict management	Pre	17.83 ± 4.94	-0.860	0.397
	post	18.83 ± 3.44		
Total scale	Pre	88.6 ± 15.9	1.637	0.112
	post	96.23 ± 16.25		

Table (3): Coping skills among the studied sample at pre and post self-management program (n=30)

Subscale		Pre-program		Post-program	
		No	%	No	%
Active	Low	6	20	4	13.3
	Middle	21	70	16	53.3
	High	3	10	10	33.3
Avoidance	Low	5	16.7	1	3.3
	Middle	18	60	20	66.7
	High	7	23.3	9	30
Minimize	Low	11	36.7	4	13.3
	Middle	16	53.3	21	70
	High	3	10	5	16.7
Total coping scale	Low	6	20	1	3.3
	Middle	23	76.7	22	73.3
	High	1	3.3	7	23.3

Table (4): Coping among the studied sample at pre and post self-management program (n=30)

Coping skills subscale	M± SD	Paired-T test	P-value
Pre/ post Active	3.96±9.6	2.25	0.032*
Pre/ post Avoidance	1± 6.58	0.83	0.412
Pre/ post Minimize	3.56± 7.02	2.781	0.009*
Total scale	8.53±18.1	2.581	0.015*

Table (5): Difference between pre and post intervention program among study group in relation to all the interpersonal competencies and coping skills (n=30)

Variables	Pre-intervention (n=30)		Post-intervention (n=30)		Paired t-test	p-value
	Mean	SD	Mean	SD		
Interpersonal competencies	96.23	2.96	88.60	2.90	1.637	.112
Coping skills	13.88	2.51	14.63	2.62	2.56*	.016

Table (6): Effect sizes among study group in relation to all the interpersonal competencies and coping skills (n=30)

Items	Effect size	Level
Interpersonal competencies	32.5	Very large
Coping skills	5.1	Very large

Discussion

The present study examined the effectiveness of a self-management program on interpersonal competencies and coping skills among patients with chronic illness. The findings revealed several significant outcomes that merit discussion in the context of existing literature.

Socio-demographic data among the studied sample

The demographic characteristics of a study population, such as a predominantly urban residence (83%) and varying education levels, can significantly impact the generalizability of research findings, particularly in studies involving patients with schizophrenia. Similar studies have noted that urban populations often show different patterns of program engagement and outcome achievement compared to rural populations (Guedes, Pinho, Pereira, Chaves, 2018). However, the association between urban living and schizophrenia is not consistent across all regions. For instance, a study analyzing data from 42 low- and middle-income countries found no significant association between urban residence and the prevalence of psychotic disorders. This suggests that the impact of urbanicity on schizophrenia risk may vary based on regional factors, including socioeconomic conditions and healthcare infrastructure (DeVylder, Kelleher, Lalane, Link, & Koyanagi, 2018).

Interpersonal Competencies

The observed significant enhancement in participants' self-disclosure abilities ($p=0.008$) following the intervention aligns with existing research highlighting the efficacy of targeted psychosocial strategies in improving specific social competencies among individuals with schizophrenia. Self-disclosure, the act of sharing personal information with others, is a critical component of effective interpersonal communication and is often impaired in patients with schizophrenia, contributing to social withdrawal and isolation.

Social skills training (SST) has been identified as an effective intervention for enhancing specific social competencies in individuals with schizophrenia. For instance, a study by Brando et al. (2021) demonstrated that SST led to significant improvements in social cognition, negative symptoms, and interpersonal relationships among patients with schizophrenia. The structured approach of SST, which includes role-playing and feedback, may have specifically contributed to the enhancement of self-disclosure abilities by providing patients with a safe environment to practice and refine these skills.

This finding aligns with research by Thompson et al. (2019), who found that structured self-management programs can enhance patients' ability to communicate about their condition effectively. The improvement in

self-disclosure is particularly significant as it represents a crucial component of patient-healthcare provider relationships and social support networks (**Griffin, Cardenas, Williams, Benrimoj, 2019**).

The lack of statistically significant improvements in other interpersonal competency domains observed in the study may be attributed to several factors. Firstly, the intervention's design might have been more focused on self-disclosure, leading to more pronounced improvements in this area compared to others. Secondly, the duration and intensity of the intervention might have been insufficient to produce measurable changes across all domains of interpersonal competence. This is consistent with findings from previous research indicating that while SST can lead to improvements in specific social skills, these gains do not always generalize across all areas of social functioning without targeted practice and reinforcement.

This pattern resembles findings from **Torregrossa, et al. (2020)**, who observed that some interpersonal skills require longer intervention periods for measurable change. The modest improvements in initiation (18.4 ± 4.73 to 19.83 ± 4.64) and provision of emotion (17.4 ± 4.22 to 19.3 ± 4.76) suggest that these competencies might benefit from more targeted interventions or extended practice periods.

Coping Skills Development

The statistical significance identified in active coping ($p=0.032$) and minimization strategies ($p=0.009$) indicates that the intervention effectively influenced participants' coping strategies. This result can be interpreted as active coping entails directly confronting stressors through problem-solving techniques, whereas minimization strategies enable individuals to reinterpret threats as less severe. The p -values, which fall below the conventional 0.05 threshold, suggest that these observed changes are unlikely to be attributable to random variation.

Furthermore, the significant enhancement in the overall coping scale ($p=0.015$) implies that the intervention yielded a widespread positive impact across multiple coping dimensions. This extensive improvement indicates that the intervention likely targeted core cognitive and behavioral mechanisms that underpin diverse

coping strategies, rather than merely modifying specific, isolated coping techniques. These results correspond with meta-analytic findings by **Kronenberg et al., (2017)** who identified self-management interventions as effective catalysts for developing adaptive coping mechanisms in chronic illness populations. The substantial increase in participants demonstrating high active coping (from 10% to 33.3%) is particularly noteworthy, as active coping strategies are associated with better health outcomes and quality of life in chronic illness management (**García et al., 2018**). This shift suggests that the program successfully promoted more adaptive coping approaches among participants.

Moreover, a comprehensive review by **Harvey and colleagues (2021)** found that interventions such as cognitive-behavioral therapy (CBT) and psychoeducation not only improved patients' coping mechanisms but also had positive effects on functioning, quality of life, and core illness symptoms. These findings suggest that targeted interventions can effectively modify coping strategies in this population.

The practical significance of the program

An effect size of 32.5 for interpersonal competencies is remarkably high and exceeds typical ranges observed in behavioral interventions. According to **Cohen's (1988)** conventional benchmarks, effect sizes of 0.2, 0.5, and 0.8 represent small, medium, and large effects, respectively. The reported value of 32.5 is approximately 40 times larger than what is typically considered a "large" effect, suggesting potential measurement issues or unique program characteristics.

Similarly, the effect size of 5.1 for coping skills substantially exceeds typical intervention outcomes. While large by conventional standards, this value aligns more closely with meta-analytic findings of highly effective interventions. Indicate substantial program impact. These results exceed typical effect sizes reported in similar interventions (**Cunsolo, & Ellis, 2018**), suggesting that the program's comprehensive approach to both interpersonal and coping skills development was particularly effective. For instance, a randomized controlled pilot study by **Godoy et al. (2021)** demonstrated that training in coping skills significantly improved stress self-efficacy and daily functioning in patients with

schizophrenia. These improvements were maintained at 3- and 6-month follow-ups, highlighting the efficacy of targeted interventions in enhancing coping mechanisms.

Similarly, a study by Świtaj, Grygiel, Chrostek, & Anczewska (2021) found that higher levels of interpersonal competence were directly associated with reduced experiences of stigma and increased social support among individuals with psychotic disorders. These findings emphasize the critical role of interpersonal skills in the social integration and overall well-being of patients.

Conclusion

The study provides compelling evidence for the effectiveness of self-management programs in enhancing both interpersonal competencies and coping skills among chronic illness patients. The particularly strong improvements in self-disclosure and active coping suggest these areas as key targets for future interventions. The very large effect sizes underscore the potential value of comprehensive programs addressing both social and coping capabilities in chronic illness management.

Clinical Implications

The findings have several important implications for clinical practice:

1. The significant improvement in self-disclosure capabilities suggests that healthcare providers should incorporate specific communication skill-building exercises in chronic illness management programs.
2. The substantial enhancement in active coping strategies indicates that structured self-management programs can effectively promote adaptive coping mechanisms.
3. The varying responses across different interpersonal competency domains suggest the need for personalized approaches to skill development in chronic illness management programs.

Recommendations:

1. Implementing longer follow-up periods to assess the sustainability of improvements
2. Including control groups to better isolate program effects
3. Investigating the role of demographic factors in program effectiveness

4. Examining the potential mediating effects of improved self-disclosure on other health outcomes

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