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Research Article

Roles and Effects of Peer Recovery Coach Intervention in the Field of Substance Abuse: An Integrative Literature Review

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SUMMARY

Purpose: There are ongoing public initiatives to help substance abusers by involving peer recovery coaches (PRCs) in the field of substance abuse worldwide. This study examines the contents and delivery methods of PRC intervention programs and their effects from the participants' standpoint.

Methods: An integrative literature search was conducted in seven electronic databases using English and Korean search terms. Two researchers independently reviewed the extracted papers and rated their quality based on predetermined inclusion and exclusion criteria, resulting in the selection of nine papers.

Results: Research on PRC participation in substance abuse treatment were predominantly US-based, and all articles derived were quantitative studies. The main roles of PRCs included liaising between treatment and community resources, assisting with stress management and coping skills, counseling and case management, and recovery and recurrence prevention education. In addition, the PRC-delivered intervention was tested with various outcome variables. It reduced participants' substance use and enhanced their treatment adherence rates, self-efficacy, quality of life, and stress control.

Conclusions: This study confirmed the need to extend existing studies by testing the effects of PRC-delivered intervention through multidisciplinary efforts in more regions and establishing PRCs' role definition and concretization. The results of this study will serve as significant basic data in developing and applying for nursing intervention programs with PRCs in clinical and community nursing settings in the future.

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Introduction

Substance use disorder (SUD) refers to an individual's continuous substance use despite its negative consequences [1]. As of 2019, more than 2.0% of the world's population was dependent on alcohol or illegal drugs [2], and 11.7% of US adolescents and adults (aged ≥12 years) use illegal drugs [3]. Furthermore, as of 2021, arrests for drug offenses reached 16,153 cases [4]. SUD is characterized by losing control of substance use, physical dependence, social problems, and hazardous use [1]. It causes health problems and social and school maladaptation in adolescents [5] and a high relapse rate and has a difficult recovery process [6]. Recovering

from addiction is a continuous process of developing a healthy and productive life by overcoming various life problems, rather than simply a cessation of addictive substances or returning to the state before addiction [7]. Hence, SUD is treated as a chronic disease [8] and necessitates continuous community-level management.

A variety of community-level health services have been developed and implemented to prevent the relapse of SUD. After adopting the chronic disease concept of SUD management, more emphasis has been placed on substance abuse recovery support programs delivered by peer recovery coaches (PRCs) [9]. PRCs are experts and mentors specifically trained to help individuals successfully recover from SUD by leveraging their own experience of recovery from SUD and other mental illnesses [10,11]. PRCs provide a wide variety of services, such as instilling hope for recovery in people with similar experiences, accompanying them through the recovery process, setting recovery goals, supporting the roadmap development process, and helping to gain access to necessary resources [11]. Such activities of PRCs not only help the addicts recover but also help them maintain their own recovery [12]. PRCs

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provide services in various formats, including one-on-one and group sessions [13,14]. These services can be delivered to different groups in various settings such as churches, prisons/jails, probation/parole programs, HIV/AIDS and other social service centers, and substance abuse and mental health treatment facilities [15].

According to the related literature, PRC programs enhance self-esteem and self-confidence [16], improve self-control [17], increase self-care participation, reduce symptoms of mental disorders and hospital admission rates [17], and increase social function participation [18]. However, these studies explore the effects of PRC programs on patients with mental disorders, with only a few studies evaluating the effects of PRC programs on SUD patients. Furthermore, the existing PRC-related literature covers either alcohol or substance abuse [9], and literature review studies lack systematic frameworks [19], conducting reviews of therapeutic interventions other than PRC programs. Given this background, this study examines the effects of PRC programs applied to SUD patients by comprehensively reviewing papers on PRC programs applied to SUD patients thus far. The integrative review performed in this study can serve as a meaningful basis for providing the rationale and direction for nursing intervention programs with PRCs for SUD patients in clinical and community settings.

Methods

Study aims

To provide the basic information for the development of nursing interventions with PRCs, this study identified the roles of PRCs in program operation and analyzed the main contents, operation methods, and effects of the programs with PRCs.

Research design

This integrative literature review was conducted according to the five steps of Whittemore and Knaf's integrative literature review model: specifying the research question, searching the literature, evaluating the literature, analyzing the literature, and presenting the results [20].

Research question

The PICO (population, intervention, control, and outcomes) of this study was as follows: P: SUD patients, I: PRC interventions, C: none, O: effects of peer support interventions. The research question of this study is, "What are the attributes and effects of PRC intervention for SUD patients?"

Literature search

Two independent researchers performed the entire literature selection process, and differences of opinion were resolved through a consensus reached in research team meetings. First, before the literature search, the research team set literature selection criteria based on coordinated opinions. Inclusion criteria were (1) articles related to the effects of PRC programs on SUD patients, (2) articles sharing full-text access, and (3) articles published in Korean or in English until March 25, 2022. Exclusion criteria were (1) articles on non-PRC interventions (e.g., pharmacotherapy); (2) dissertations, letters to the editor, conference presentation papers, and reviews; and (3) articles that have not been published in Korean and English. Two independent researchers conducted the literature search from March 25 to April 5, 2022. In South Korea, PRCs are also working, and there was a possibility that published Korean papers about the effects of their participation existed. Therefore, the articles searched

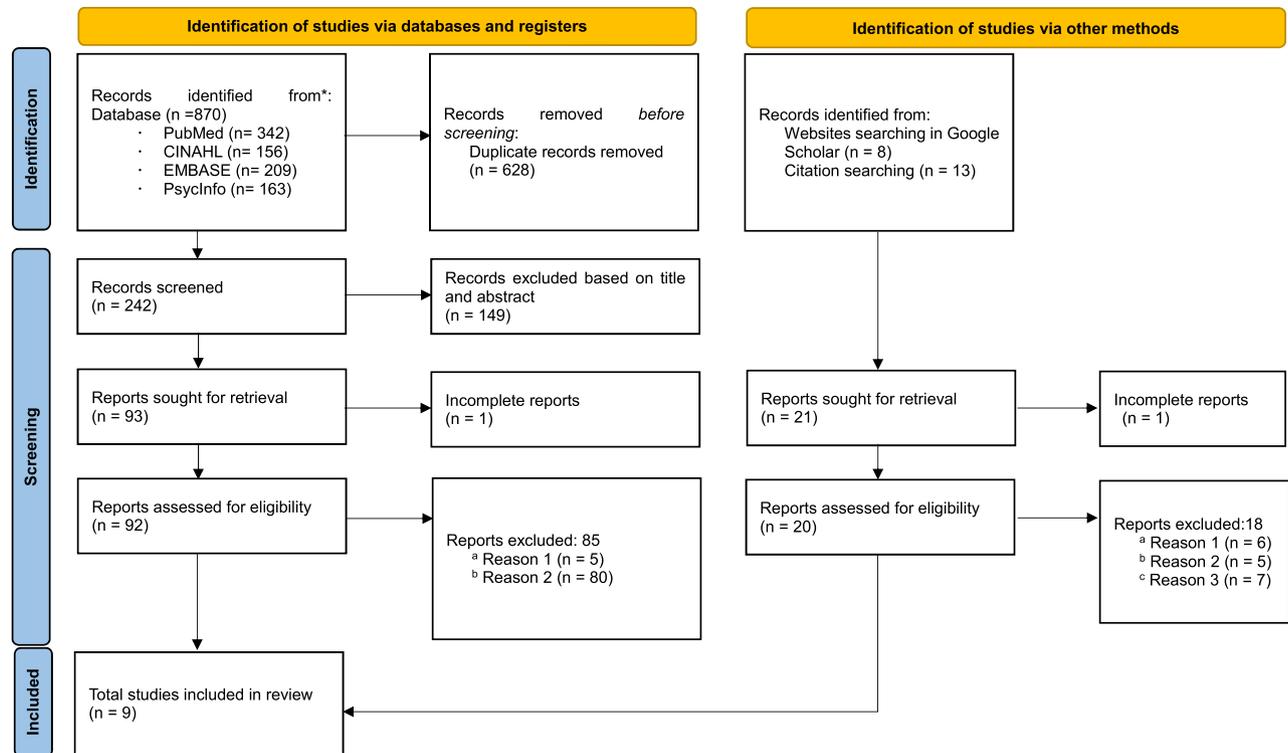
were related to PRC interventions (programs) for SUD patients and published in Korean and English academic journals. Seven databases were searched: three Korean (Research Information Sharing Service [RISS], Korean studies Information Service System [KISS], and Data Base Periodical Information Academic [DBpia]) and four international (CINAHL [Cumulative Index to Nursing & Allied Health Literature], EMBASE, PubMed, and PsycINFO). Search terms were selected based primarily on the Medical Subject Headings (MeSH) and on English titles and keywords of previous studies to find out the most frequently occurring keywords. As a result, the following search formula was established: ("Substance-Related Disorders" OR "Substance Related Disorder" OR "Substance Abuse*" OR "Substance Dependence" OR "Substance Addiction" OR "Substance Use Disorder") AND ("Consumer Provider" OR "Addiction Recovery Counselor" OR "Recovery Activist" OR "Peer Recovery Coach" OR "Peer Support" OR "Peer Recovery Specialist") AND (Program OR Intervention) (Supplementary file 1). Therefore, databases such as CINAHL, EMBASE, PubMed, and PsycINFO were searched using the search formula, and all cases for each combination of terms were substituted and correspondingly searched in the Korean databases. The articles retrieved from the databases were cataloged using the bibliographic management software (EndNote 20.2.1) and then reviewed and classified. No eligible article was found in the Korean databases, and the 870 English articles found in the international databases underwent the following screening process: First, 628 articles were extracted after removing duplicates. Second, in the review of titles and abstracts, 149 articles that did not meet the selection criteria were removed, leaving 93 articles. Third, an article that was not full text was deleted from the full-text review. Fourth, through the researcher's meeting, five articles in which participants were not SUD patients or had other mental disorders other than SUD were excluded, along with 80 articles that did not perform peer support intervention. Furthermore, 13 additional articles were searched for relevant literature during the full-text review, and eight articles were additionally analyzed through a search in Google Scholar. After removing one non-full-text article, six not including SUD patients, five without peer support intervention, and seven review articles not for intervention studies were removed. Finally, nine articles were selected for analysis at the researcher's meeting (Figure 1).

Quality evaluation of the literature

The selected papers went through quality evaluation based on the Joanna Briggs Institute (JBI) checklists, which were separately applied to randomized clinical trials [21], quasi-experimental trials [22], and cohort studies [23]. The number of items and their contents of the JBI questions were applied differently depending on the study design, and each checklist is presented in Supplementary files 2–4. Each item is structured to be answered with "yes" (Y), "no" (N), "unclear" (UC), or "not applicable" (N/A). "Yes" indicated that the JBI quality evaluation standard was met. When evaluating the quality of articles using the JBI Quality Assessment Checklist, two researchers separately evaluated and compared them. In the case of disagreements, they were jointly evaluated by these researchers to reach a consensus. Table 1 presents the quality evaluation results for the nine articles selected.

Analysis of the literature

The general characteristics of the selected articles were analyzed in the order of the country of study, year of publication, and research design and the PRC programs applied to SUD patients in the order of the program participants, type, content, results, and effects. Two independent researchers analyzed the literature. They



^a Reason 1: The subjects were non-SUD patients (PRCs or experts) or SUD patients comorbid with other mental illnesses.
^b Reason 2: The studies did not involve peer support intervention or peer support was not the main program topic.
^c Reason 3: The papers were literature reviews or peer-reviewed articles.

Figure 1. PRISMA 2020 Flowchart of Study Selection.

reviewed the entire literature independently of each other and integrated their analysis results. Differing opinions were resolved through intensive discussions and reviews until a consensus was reached.

Presenting the results

Nine studies were included in this study, and their results are presented in the following section. The results of the integrative literature review are presented in the order of the general characteristics of the literature, the contents and implementation formats of the PRC programs, the role of the PRC, and the effects of the PRC programs.

Ethical considerations

This study was approved by the Institutional Review Board of G University (IRB No. GIRB-G221**24).

Results

General characteristics of the literature

Table 2 outlines the general characteristics of the selected articles. All nine selected articles for analysis were US studies published in 1985 (1 article) and between 2008 and 2021 (8 articles). Randomized clinical trial was the most common research design

Table 1 JBI Critical Appraisal of Included Studies by Research Design.

Design/citation	Critical appraisal												
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13
RCTs													
Kirmil-Gray et al. (1985)	Y	Y	Y	Y	UC	Y	Y	Y	Y	Y	Y	Y	Y
Winhusen et al. (2020)	Y	Y	Y	UC	UC	Y	Y	Y	Y	Y	Y	Y	Y
Belenko et al. (2021)	Y	Y	Y	Y	UC	Y	Y	Y	Y	Y	Y	Y	Y
Ray et al. (2021)	Y	Y	Y	Y	UC	Y	Y	Y	Y	Y	Y	Y	Y
Quasi-experimental studies													
Ashford et al. (2019)	Y	N/A	N/A	N/A	Y	UC	Y	Y	Y	–	–	–	–
Cos et al. (2019)	Y	Y	N/A	N/A	Y	Y	N/A	Y	Y	–	–	–	–
Cohort studies													
Blondell et al. (2008)	Y	Y	Y	UC	UC	Y	Y	Y	Y	UC	Y	–	–
James et al. (2014)	Y	Y	Y	Y	Y	Y	Y	Y	Y	UC	Y	–	–
Mills Huffnagle et al. (2021)	Y	Y	Y	Y	Y	Y	Y	UC	UC	UC	Y	–	–

Note. N = no; N/A = not applicable; RCT = randomized controlled trial; UC = unclear; Y = yes.

Table 2 General Characteristics of the Reviewed Articles (n = 9).

Category	Content	n	%
Country	USA	9	100
Published year	1985	1	11.1
	2008	1	11.1
	2014	1	11.1
	2019	2	22.2
	2020	1	11.1
Research design	2021	3	33.4
	RCT	4	44.5
	Quasi-experimental study	2	22.2
	Cohort study	3	33.3

Note. RCT = randomized controlled trial.

(n = 4, 44.5%), followed by cohort study (n = 3, 33.3%) and quasi-experimental study (n = 2, 22.2%). The effects of the programs applied in these articles were identified by comparing pretest-posttest design or cohort groups.

PRC program contents and implementation formats

Table 3 presents the PRC program types provided in each of the nine selected articles. The PRC programs were provided in face-to-face (offline) and contact-free (phone/messaging) formats. Four programs [24–26] used only face-to-face format, and four programs [28–31] used both formats. Only one program [32] exclusively used the contact-free format, which included phone calls, text messages, and email. A PRC ran one program [27], and two or more PRCs were involved in five studies. Each session ranged between 20 and 120 minutes, and the program applied in Ray et al. [27] was flexibly operated based on the participants' needs or preferences.

PRC's role

The roles played by PRCs in program operation were derived as follows. First, they recommended participation in a therapy program for SUD patients to be treated by specialists or encouraged attendance in a therapeutic intervention [25,28,29,31,32]. That is, they played the role of “navigator” for patients in their combat against SUD, enhancing their motivation for alcohol and drug abstinence and encouraging them to participate in self-help groups and therapeutic intervention programs. Second, they helped SUD patients better manage their stress [26] and control substance use by guiding them through practicing effective coping strategies in their living environment. Third, they sought to prevent substance abuse and relapse by providing SUD patients with emotional support [24], counseling, and case management services [27,31]. Fourth, they educated SUD patients about SUD recovery and recurrence prevention, explored community resources to help them with rehabilitation, and encouraged them to achieve their goals [30].

Effects of PRC programs

The variables used to identify the effects of PRC intervention were the extent of using substances such as alcohol and drugs [26–29,31,32], program participation rate [24,25,28–31], therapy motivation [27], self-efficacy [26,27], quality of life [28], stress [26], alcohol and drug abstinence [24], and the number of intensive care unit admissions due to substance use [29].

Table 3 presents the outcomes of PRC programs. Their effects can be summarized as follows. First, PRC programs had a positive

effect on reducing substance abuse. PRC intervention significantly impacted opioid overdose and regular intake of alcohol and substances and positively affected adherence to 7-day abstinence after discharge [24,28,29,32]. In some studies, however, the effect of reducing alcohol and illicit drug abuse declined over time, from 30.0% at the baseline to 16.0% over 6 months [27]. However, no statistical evidence was presented regarding the level of substance use reduction [32]. Second, PRC programs enhanced the treatment adherence rate. SUD patients made efforts for treatment by attending self-help programs or complying with rehabilitation programs [24]. SUD patients adhered more to treatment participation from referral to treatment. They also completed their treatment plans and did not miss treatment sessions [25]. Furthermore, they readily attended medical appointments [30], drug court engagement [31], and showed higher motivation for treatment [27]. However, statistically significant improvements could not be maintained [30]. Third, PRC programs effectively increased self-efficacy [26,27] immediately after the program and at the 1-year follow-up. Fourth, PRC programs improved the quality of life [28]. Fifth, they also positively affected stress control [24].

Discussion

This study was conducted to provide useful data for developing and applying PRC-delivered programs for SUD patients in South Korea and abroad by examining their contents, methods, and effects.

No Korean studies were encountered in the literature search for articles analyzing the effects of PRC programs, and foreign studies derived were predominantly US studies. Regards research design, they were all quantitative studies. In South Korea, there are a few studies on PRC-delivered intervention in the field of social welfare. However, their focus was on the standpoints of PRCs or practitioners, and the research itself is in its incipient stage [33–35]. This may be attributable to a complex interaction of multiple factors associated with the immature PRC business model, such as a lack of PRC's role definition, unstructured work profile [36,37], distrust in the professionalism associated with the involvement of ex-addicts, and insufficient financial support [12]. Some qualitative studies aim to confirm the effectiveness of PRC participation in SUD. However, they revolve around interviews with practitioners or PRCs, not with SUD patients [38,39]. Given the importance of in-depth exploration and understanding of the changes and effects experienced firsthand by SUD patients, it is necessary to conduct further qualitative research to confirm the effects of PRC programs from the standpoint of SUD patients.

Regarding program delivery methods, PRC participation programs were mostly provided using hybrid formats of face-to-face and contact-free methods. The main reasons for adopting a contact-free approach by extending the existing face-to-face method include providing convenience and flexibility to compensate for accessibility constraints and mitigating the problems of shame and stigma by ensuring the participants' anonymity [40–42]. The recent difficulties encountered due to social distancing measures to cope with the COVID-19 pandemic have led to temporary suspension or delay of SUD services and subsequent increases in relapse risk [40,43]. This highlighted the need to develop efficient contact-free SUD intervention programs, including PRC participation programs, in preparation for the current and future pandemics. Along with the diversification of program delivery methods, the involvement of two or more PRCs was advantageous over a single PRC participation. The substance abuse recovery process is self-directed, and each individual recovering from substance abuse is exposed to a unique experience of the withdrawal process. Therefore, it is necessary to adopt an approach

Table 3 Summary of PRC-Delivered Program for SUD Patients.

Authors (yr)	Participants				Program type	Program contents	Significant outcomes				
	Exp. group		Ctr. group								
	n	Mean age (yr)	n	Mean age (yr)							
					Contact method	No. of PRCs	No. of sessions	Time per session	Periods (wk/mo)		
Kirmil-Gray et al. (1985)	6	48.00	6	52.00	Face-to-face	2	12	120 mins	12 wk	(1) Providing daytime stress treatment: merged the brief consultation treatment with direct instruction in specific skills to reduce physical tension and review mental arousal and group meetings and peer support for behavior change. (2) (a) Relaxation exercise: 10–15 mins. (3) (b) Reported on the quality of sleep, medication use, and homework completed during the previous week. (4) (c) New skills were presented followed by exercises that required participants to apply these skills to situations in their own lives (5) (d) Assignments to try out new skills in everyday situations during the coming week	All-night home polysomnographic recordings:(1) Latency to sleep onset ($p = .04$) (2) Total wake time ($p = .04$) (3) Sleep efficiency ($p = .04$) (4) Total dark time ($p = .04$) Self-efficacy: Limit early awakenings ($p < .01$) Stress: Novaco Anger Scale ($p = .04$)
Blondell et al. (2008)	20	40.00	99	38.00	Face-to-face	2	N/A	30–60 mins	N/A	Providing emotional support to patients hospitalized for detoxification To enhance the patient's motivation to maintain abstinence To encourage the patient to attend meetings of self-help groups and initiate professional chemical dependency treatment after hospital discharge Explain involvement in self-help programs.	Abstinent for 7 days after discharge ($p = .06$) Initiated rehabilitation services ($p = .06$) Attended self-help program meeting ($p = .05$)
James et al. (2014)	681	28.63	681	28.57	Face-to-face	N/A	N/A	N/A	N/A	Providing outreach and engagement to parents recently referred to the program Served as “navigators” as the preferred parents initiated treatment for substance use disorders	Days from referral to assessment ($p < .01$) Days from referral to first service ($p < .01$) Completed treatment plan ($p < .01$) Other reasons for closure ($p < .01$) Discontinued participation ($p < .01$)
Ashford et al. (2019)	205	39.94	N/A	N/A	Face-to-face, phone call, text message	N/A	N/A	N/A	N/A	Referrals to a distinct level of care (e.g., withdrawal management, inpatient residential rehabilitation, recovery residence) Community-based referrals (e.g., mutual-aid support groups)	Multiple peer specialist engagements and regular alcohol use were significant Response to initial peer engagement and substances regularly used were significant
Cos et al. (2019)	350	47.30	N/A	N/A	Face-to-face, phone call	3	N/A	N/A	9 mo	To connect new patients to the FQHC and the peer specialist program included street outreach in high drug use locations, presentations at local shelters, recovery homes, and intensive outpatient treatment programs Conducted via phone and in-person visits to connect with clinic patients	Substance use outcomes Care and service utilization outcomes Behavioral health outcomes Quality of life, criminal justice system involvement, and infectious disease outcomes

(continued on next page)

Table 3 (continued)

Authors (yr)	Participants				Contact method	No. of PRCs	Program type			Program contents	Significant outcomes
	Exp. group		Ctr. group				No. of sessions	Time per session	Periods (wk/mo)		
	n	Mean age (yr)	n	Mean age (yr)							
Winhusen et al. (2020)	23	40.30	21	38.00	Phone call	4	N/A	20 mins	N/A	who had not contacted the medical clinic or peers in over 3 mo Encouraging participants to enroll in MOUD	Self-reported opioid overdose ($p = .03$)
Mills Huffnagle et al. (2021)	47	35.00	230	37.60	Face-to-face, phone call, text message, email	N/A	Weekly, gradually increasing or decreasing touchpoints as stages of recovery (M \pm SD = 14.0 \pm 18.2)	N/A	N/A	Providing education related to substance use disorder and the recovery process Development of long-term sustainable recovery through community resources Navigation through managed care systems Connections to appropriate resources Modeling a recovery lifestyle Empathizing with cravings to use or a return to use Developing use prevention plans Empowering participants to succeed in their identified goals	Medical appointments ($p = .02$)
Belenko et al. (2021)	39	28.20	37	26.70	Face-to-face, phone call	3		N/A	9 mo	Encourage participation in rehabilitation and treatment. PRC to have their first face-to-face contact with their client within five business days of the initial contact, followed by a minimum of three face-to-face meetings and one phone contact each month	Drug court engagement ($p = .02$)
Ray et al. (2021)	46	39.00	54	38.50	Face-to-face	1		Individualized based on client needs and preferences	12 mo	Offer guidance, support, and coordination of treatment services \$700 voucher support to cover the cost of the additional flexible recovery support services Substance use counseling and case management services	Treatment motivation (external motivation) after 6 mo ($p = .04$) Self-efficacy after 12 mo ($p = .03$) Alcohol or illegal drugs use decreased from 30% at baseline to 16% at 6 mo, which is not statistically significant

Note. Ctr = control; Exp = experimental; FQHC = federally qualified health center; M = mean; Mo = months; PRC = peer recovery coach; SD = standard deviation; Wk = weeks; yr = years.

emphasizing the pursuit of a personal agenda in conducting PRC programs [9,12]. For example, each US state has its coherent system of training and certifying PRCs [19], and a similar system is being adopted in South Korea [35]. In this context, particular care should be given to the coherency of the PRC education system to avoid confusion in defining PRC's roles, qualifications, and competency areas due to interregional and international differences.

This study confirms various roles of PRCs in preventing SUD relapse and recovery from SUD. This finding is supported by previous studies that report that PRCs can help SUD patients through their roles as emotional supporters, information providers, educators, liaisons between treatment and resources, role models, and mentors [39,44–46]. Furthermore, PRCs have experienced addiction problems themselves and continue to make efforts to prevent recurrence and maintain recovery in daily living. Therefore, this is a great strength in assuming their roles by providing SUD patients with efficient and concrete coping strategies based on an in-depth understanding of their situations [47]. However, the PRC model is faced with challenges such as role definition, personnel recruitment, and fundraising necessary for PRCs' activities at home and abroad [46,48]. For PRCs to act as an entity providing practical help to SUD patients by leveraging their strengths, it is necessary to establish a concrete and consistent role definition, policy approach, and multidisciplinary cooperation, including nursing.

In the articles reviewed, the effects of the programs provided with PRC involvement were evaluated through various outcome variables. Previous studies reported positive effects of PRC involvement in reducing participants' substance use [9,49] and enhancing the referral to treatment, self-efficacy [50,51], stress control [50], and quality of life [50,52]. However, there are also reports of contrary effects in different PRC participation studies, such as no significant difference in the participants' quality of life [53]. Some of the articles analyzed in this study reported no significant differences in the reduction of substance use or maintenance of treatment [27,30,32] and decrease in the effects [27]. Based on these discrepancies, we additionally attempted to perform the meta-analysis (Supplementary file 5) for three outcome variables (substance use, treatment participation rate, and self-efficacy) common to two papers, all three outcome variables had I^2 values of 70 or higher, indicating that they were not homogeneous. In the analysis for effect size (effect size [95% confidence interval]), "reducing substance abuse" was found to be insignificant (1.03 [0.09, 12.44]). This might be because two studies reporting contradictory results were included in the analysis. Contrarily, "treatment participation rate" and "self-efficacy" were significant (4.51 [1.29–7.74] and 3.29 [1.11–5.48], respectively), and these can be interpreted that the PRC programs have the significant effects on "treatment participation rate" and "self-efficacy" for SUD subjects. However, the test included only the studies that presented all the necessary data for meta-analysis, so only some papers were analyzed (2 papers per each variable). Therefore, the meta-analysis results are likely biased. The research on PRC involvement programs is in a nascent stage and are few relevant studies. In addition, the outcome variables and methods applied to verify the effects of the programs are diverse. Based on the results of this study, follow-up studies applying meta-analysis are proposed to analyze the systematic and quantitative effects of the programs if more papers on the same topic are published in the future. In addition, depending on the existence of heterogeneity, analyzing the causes of the heterogeneity such as subgroup analysis and meta-regression would be needed.

Given the complexity of personal problems associated with substance abuse, various approaches are required to address SUD patients' recovery [54]. For evidence-based interventions with proven efficacy in substance abuse, including PRC involvement,

to be actively used, interdisciplinary endeavors and cooperation are required in clinical and community nursing settings. A previous study identified the negative attitudes of mental health experts as one of the major barriers to PRC involvement [12]. Nurses are in an ideal position to provide leadership in promoting the roles of PRCs in the clinical and community settings [12]; therefore, these barriers should be addressed by concerted efforts to verify the efficacy and improve the perceptions of PRCs' activities in the nursing arena. Development and application of nursing intervention programs with PRCs involvement based on PRC's activities and empirical research results will improve participants' mental health, diversify the approach in the related nursing practice in Korea, and improve the competency of nursing practitioners.

This study provides basic data and a rationale for developing nursing interventions that can create synergy effects with PRCs by presenting results regarding the contents, methods, and effects of PRC involvement in programs in the substance abuse fields. The results of therapeutic use of the lived experiences of PRCs related to relapse prevention and recovery maintenance provide opportunities for nursing students to understand addicts in greater depth; in addition, meaningful information can be provided for the students to plan nursing interventions and educational programs with PRCs. By identifying the roles of PRCs and examining the effectiveness of the PRC involvement programs, it is also possible to reduce prejudice and promote understanding by health professionals.

Despite the significance of this study, there are also limitations. First, the articles selected for analysis are regionally concentrated in a specific country, which affects the generalizability of the results drawn in this study in applying them to the entire SUD patients participating in PRC-delivered intervention programs. Second, by analyzing the effects of PRC programs from the standpoint of SUD patients, the perspectives of practitioners and PRCs involved could not be considered. Therefore, an integrative analysis of the effects of PRC participation programs in different fields is necessary to expand the research scope.

Conclusions

This study was conducted to identify the main contents, methods, and effects of the PRC-delivered intervention in the field of substance abuse from the participants' standpoint through an integrative literature review. This literature analysis confirmed the need to conduct research in different countries using various research designs to address the problems of regional concentration of research activities in the US and the methodological predominance of quantitative research. It was also found that face-to-face and contact-free intervention programs used a wide range of contents and approaches to the treatment of and recovery from substance abuse in addressing the complexity of substance abuse issues, which may serve as basic data useful in preparing for the current and future pandemics. In addition, PRCs' roles in linking treatment and resources, stress management and coping, emotional support, counseling, and case management, and PRCs' positive influence reduced substance use and improved participants' referral rates to treatment and psychosocial help. These research findings are expected to provide important primary data and guidelines for developing and implementing intervention programs with PRC involvement in clinical and community nursing settings in the future. Specifically, they might also present the necessary direction and rationale for attempting continuous changes in South Korea, which is in its incipient stage of research on examining the application and efficacy of PRC participation programs.

Conflict of interest

The authors declare no conflict of interest.

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