

Hybrid Virtual Group Model for Substance Use Disorder Therapy: A Scoping Review

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Background: Substance use disorder (SUD) group therapy has traditionally been conducted in-person; however, there is growing interest in virtual formats. While virtual group therapy can address certain barriers for in-person attendance, it may compromise key elements like therapeutic alliance and group cohesiveness. A model that integrates both in-person and virtual participants may help balance the benefits of these two approaches.

Objective: To identify and define approaches to SUD group therapy that integrate in-person and virtual participants, summarize study outcomes associated with these models, propose standardized terminology, and provide preliminary recommendations for their application in SUD treatment.

Design: A comprehensive search was conducted on 11/13/2024 and updated on 12/16/2024 by a medical librarian. Included articles were published 2000 onwards and conducted with SUD group therapy where participants or group facilitators were both in-person and virtual. We extracted data from 4 articles that met the search criteria.

Results: A total of 1353 articles were screened, 20 were evaluated at the full-text level, and 4 met study inclusion criteria. Two “hybrid” model designs for SUD were identified. One model utilized a virtual group facilitator, while participants remained together in-person. The second model kept the facilitator in-person and allowed group participants to be present either virtually or in-person within the same group. Outcomes evaluated included treatment completion across groups and patient perceived changes in therapeutic alliance, group cohesion, and understanding of addiction.

Conclusion: We propose a consensus definition of hybrid virtual group models where at least one group member, either the facilitator or one of the participants, attends groups in-person while at least one member attends virtually. While research is limited, early findings suggest that hybrid SUD groups have similar outcomes to in-person groups and better outcomes than virtual-only groups. Unique considerations should be made to ensure that hybrid SUD models are implemented appropriately and effectively.

Keywords: addiction, telehealth, teleconferencing, treatment delivery

Introduction

Background and Rationale

Group therapy is a foundational component of substance use disorder (SUD) treatment, offering well-documented benefits in enhancing social functioning and supporting recovery.^{1–3} Traditionally delivered in person, group therapy has increasingly transitioned to virtual and online formats (ie, telehealth) to improve access and adapt to changes prompted by the COVID-19 pandemic.⁴ Treatment-seeking patients with SUD have reported high satisfaction with telehealth.⁵ Broadly, benefits have been seen with treatment retention,⁵ decreased medication discontinuation,⁶ reduced alcohol use,⁷ and fewer opioid-related overdoses.⁶ Most of these benefits have been described for individual patients, with less focus on group dynamics.

In the era of telehealth, group participation has shifted toward a primarily dichotomous approach, with members joining either exclusively in-person or entirely virtually. This exclusively virtual approach may impact the level of emotional bond and mutual support amongst group members (ie, group cohesion) and the collaborative and trusting relationship experienced between

a patient and their healthcare provider (ie, therapeutic alliance).^{8,9} These dynamics are positively correlated with improved SUD treatment outcomes.¹⁰ Therefore, the thoughtful design of how virtual treatment is delivered is imperative. A third model of group therapy also exists. A group may mix these two approaches, with group members joining virtually from off-site with others who are attending in-person. However, there is no set definition or terminology. Establishing a common language for healthcare providers and researchers is important for the systematic advancement of research. Additionally, the use of consensus terminology increases the generalizability of study outcomes, helping real-world populations.¹¹

Currently, there is no known review that maps the existing literature on SUD group therapy that combines formats where members are joining both in-person and virtually from off-site. A scoping review would provide a cohesive front to understanding what is known about this model and its benefits, the terms used to describe it and how they are operationalized, identify current research gaps, and provide an early consensus definition.

Objectives

This scoping review of the literature aims to identify and define group therapy approaches that combine virtual and in-person participants in the context of SUD treatment. Additionally, this review will summarize current outcomes of these therapy groups compared to traditional in-person or all virtual SUD group therapies. Standardized terminology addressing the different types of group approaches will be provided for future use in research and practice. The review seeks to address the changing landscape in which SUD group therapy is performed and provide recommendations for the utilization of group therapy that combines virtual and in-person formats in SUD treatment.

Methods

Data Sources and Search Strategy

A comprehensive search of the literature was conducted by a medical librarian for the concepts of SUD and therapy groups that combine in-person and virtual participants. Search strategies were created using a combination of keywords and standardized index terms with input from the study investigators. Searches were run on November 13, 2024, in EBSCO CINAHL with Full Text (1963+), ClinicalTrials.gov (2000+), Ovid Cochrane Central Register of Controlled Trials (1991+), Ovid Embase (1974+), Ovid Medline (1946+ including epub ahead of print, in-process and other non-indexed citations), Ovid PsycINFO (1806+), Scopus (1788+), and Web of Science Core Collection (Science Citation Index Expanded 1975+ and Emerging Sources Citation Index 2015+). An updated search was conducted December 16, 2024. Full search strategies are provided in the [Appendix](#).

Inclusion/Exclusion Criteria

Included studies specifically examined SUD treatment groups in which adult patients (18+ years old) and treatment providers participated together in the same group setting through a combination of in-person and virtual formats. Studies published in the year 2000 and forward were included, which ensured reviewed articles were reflective of contemporary research and relevant to current clinical practices while also providing a greater timeframe than past telehealth in addiction treatment reviews.¹² Empirical studies, including randomized controlled trials, cohort studies, case-controlled studies, and qualitative studies, were included, while commentaries, editorials, letters, opinion pieces, conference abstracts, dissertations, book chapters, and animal studies were excluded. Titles and abstracts were independently screened by at least two co-authors (EAT, NLB, TSO) for possible inclusion. Full-text review was also conducted by at least 2 co-authors (EAT, NLB, TSO). Disagreements on article selection were resolved by discussion and group consensus, with TSO having the final decision.

Data Extraction

Extracted articles were compared and categorized by population, model type, comparator, model descriptives, and treatment outcome. The overall quantitative and qualitative outcomes of these articles were also explored.

Results

Study Selection

The PRISMA flow diagram is available in [Figure 1](#). After limiting results to English language and adults from the year 2000 onward with most conference abstracts, comments and editorials removed, a total of 2850 citations were retrieved. Deduplication was performed automatically in Covidence leaving 1353 citations for screening. After the screening process which implemented the inclusion and exclusion criteria on titles and abstracts, twenty articles remained for full-text review. Following the review, 4 articles remained for data extraction.

Characteristics of Sources

Treatment delivery model characteristics are shown in [Table 1](#). Cohorts occurred in intensive outpatient program (IOP) (n=2) and residential (n=2) treatment settings. All articles were published from 2021 onward and followed the implementation of virtual therapy in the context of COVID-19 safety precautions. Two studies referred to the treatment modality as a “hybrid model”, while the remaining two lacked a clear descriptive term. One study variably described the model as “hybrid group/format”, “virtual model”, and “telehealth-delivered”.¹³ In contrast, another study primarily referred to their model as “group

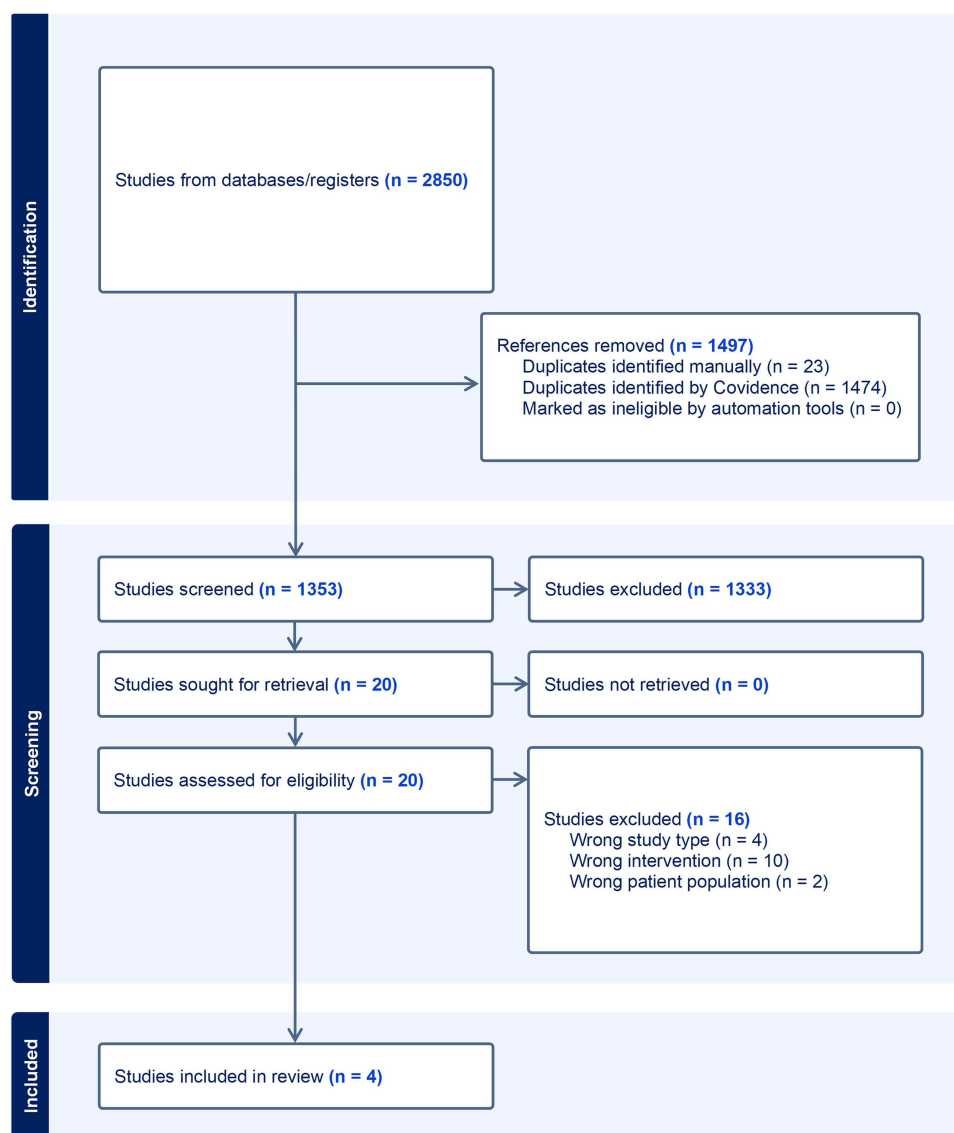


Figure 1 PRISMA flow diagram.

Table 1 Article Population, Model Type, Descriptives, and Comparators

Author	Population	Model Type Identified	Model Descriptives Used	Comparator
Kneeland et al (2021) ¹⁴	Emergency responders and active-duty military enrolled in an intensive residential care	Group leader worked remotely, while patient groups were on-site at a hospital	"Group therapy via videoconferencing"	—
Oesterle et al (2024) ¹⁵	Participants enrolled in IOP SUD treatment	Group Counselor joined in-person, while participants were both in-person and virtually	"Hybrid Model"	Virtual-only groups and "dually- exposed" groups
Bjork et al (2024) ¹³	Veterans in residential SUD treatment in a VA center	Group therapist was off site, while veterans were together in the same room	"Hybrid group/ format" "Virtual model" "Telehealth delivered"	In-person only group
Bormann et al (2024) ¹⁶	Participants enrolled in IOP SUD treatment	Group Counselor joined in-person, while participants were both in-person and virtually	"Hybrid Model"	In-person only group and virtual-only group

therapy via videoconferencing".¹⁴ Terms used to identify the group facilitator (ie, the healthcare provider tasked with managing the group's activities and participation) included "leader", "counselor", and "therapist".

Two delivery model types were identified from the articles. In 2 articles, the group facilitator was virtual, while those receiving therapy were grouped together in-person.^{13,14} The remaining 2 articles described a "hybrid model" with the group facilitator in-person, while those receiving therapy had the option to either also attend in-person or join virtually with their images displayed on television screens in the group room.^{15,16}

Group Outcomes

Virtual Facilitator with In-Person Participants

Kneeland et al introduced their treatment delivery model via a qualitative article discussing the procedures, challenges, and troubleshooting that occurred with its establishment.¹⁴ Participants remained in their in-person residential facility, while group facilitators moved to a virtual setting after the onset of the COVID-19 pandemic. While no objective measures were included, the authors provide notes for which to develop a similar virtually facilitated therapy model.

Bjork et al compared quantitative outcomes between in-person (n=124) and virtually facilitated (n=21) groups.¹³ No differences were seen between groups for measures of quality of life, treatment skill knowledge, and treatment satisfaction. However, quality of life scores did significantly increase for both the in-person and virtually facilitated groups. The authors use this to suggest that the facilitators' location may not impact outcomes.

In-Person Facilitator with Participants Both In-Person and Joining Virtually

Oesterle et al used a naturalistic cohort study to compare patients receiving IOP SUD treatment through COVID-19 restrictions. This resulted in 3 cohorts: 1) virtual-only cohort, 2) hybrid-only cohort where therapy group facilitators were in-person, while participants were present both in-person and virtually, and 3) a "dually exposed" cohort where participants were exposed to both the virtual-only and hybrid-only groups over the time period. Treatment completion was the outcome of interest. Helmert contrasts showed an improved odds for the hybrid-only cohort compared to the virtual-only cohort (odds ratio = 1.88, 95% CI: 1.5–2.37), as well as improved odds for the "dually exposed" cohort compared to the hybrid-only cohort (OR = 1.99, 95% CI: 1.65–2.41).¹⁵

Utilizing the same IOP groups, Bormann et al surveyed patient satisfaction, perceived therapeutic alliance, group cohesion, and treatment insight between virtual, in-person, and hybrid groups (with an in-person facilitator).¹⁶ Analysis of covariance showed that while survey responses did not differ between hybrid and in-person groups, virtual groups were rated significantly worse than in-person groups on 6 of the 8 survey questions. The authors suggest that the non-significant effect size between hybrid and in-person groups, combined with the small to moderate effect size for virtual groups relative to in-person, indicate that the presence of some participants in person with the facilitator may enhance group dynamics and overall benefit. Table 2 summarizes the results of the three quantitative studies that were extracted.

Table 2 Results of Quantitative Articles

Author	Sample Size	Measured Outcomes	Key Findings
Oesterle et al (2024) ¹⁵	Virtual Only (N = 234) Hybrid Only (N = 161) Dually Exposed (N = 463)	Treatment Completion	Helmert Contrasts: Improved odds for hybrid only cohort compared to virtual only cohort (OR = 1.88, 95% CI: 1.5–2.37). Improved odds for dually exposed cohort compared to hybrid only cohort (OR = 1.99, 95% CI: 1.65–2.41).
Bjork et al (2024) ¹³	1. In-person (N = 124), Telehealth-delivered (N = 21) 2. In-person (N = 62), Telehealth-delivered (N=32) 3. In-person (N = 62), Telehealth-delivered (N=32)	1. Quality of Life Inventory 2. Treatment Skill Knowledge 3. Treatment Satisfaction	1. ANOVA: No significant difference in improvement between groups, $F(1,143) = 0.66$, $p = 0.42$. Significant improvements in quality of life for both groups. 2. Chi squares and T tests: No significant group differences in comprehension items with high rates of correct responses in both groups. 3. Chi squares and T tests: Mean scores of satisfaction domains ranged from 9.08 to 9.75 out of 10. No significant difference between in-person and telehealth-delivered group.
Bormann et al (2024) ¹⁶	In-person (N = 279–283) Hybrid (N = 149–155) Virtual (N = 332–339)	Patient satisfaction, Perceived therapeutic alliance, Group cohesion, Treatment insight	T tests: No significant difference between hybrid group and in-person group for all 8 survey questions. Virtual group rated worse than in-person group for 6 of the 8 survey questions.

Synthesis of Results

A framework for combined in-person and virtual delivery of SUD treatment arose from the extracted articles. Articles first defined the use of this delivery model as one with any mixture of virtual or in-person components. For example, Oesterle et al and Bormann et al defined these groups as ones where “patients attended both in-person and remotely” and as “a combination of patients in-person with the therapist while others join virtually”, respectively.^{15,16} Bjork et al defined their model as when “a remote group therapy provider is connected ... through a single telehealth screen ... while the patients can interact with each other face-to-face”.¹³ The model definition in Kneeland et al was a “remote cognitive-behavioral group therapy in a residential treatment program embedded within a hospital-based setting”.¹⁴ Given that the majority of the articles used the term “hybrid”, these delivery models were labeled as such. Each hybrid model had facilitators organizing and leading the SUD therapy groups, although they varied in location. Thus, models were categorized by the location in which their facilitator was conducting the group. The group facilitator could be based at a designated physical location that was accessible to participants, or they could be based at a private, virtual location.

Another key characteristic of hybrid models is how participants are permitted to attend the group sessions. If the group was to be virtually facilitated, the group’s participants could be in-person at the same location, as was seen in half of the extracted articles.^{13,14} Although no article had a virtual facilitator with mixed in-person and virtual participants, that type of model is a possibility. Contrastingly, if the facilitator was placed at a physical location, a mixed participant approach was the only option to keep the delivery model truly “hybrid”.

To promote clarity and consistency in the future use of hybrid models, we propose a nomenclature system based on two dimensions shared by all of the extracted articles: 1) the location of the group facilitator and 2) the location of participant attendance (Figure 2). Using this framework, those models where a remote facilitator leads a group of participants in the same physical location can be named a “Virtually facilitated, In-Person Hybrid” model (VF-IP Hybrid). For the models including an in-person facilitator with participants joining in-person as well as virtually, an appropriate system-based name is “In-Person Facilitated, Mixed Participant Hybrid” model (IP-MP Hybrid). A third potential model that was not identified in this review incorporates mixed participant attendance with a virtual-facilitator, therefore named a “Virtually facilitated, Mixed Participant Hybrid” model (VP-MP Hybrid).

Discussion

Summary of Evidence

This scoping review identified four articles that depict a combined in-person and virtual delivery model of SUD group therapy. Among these, two studies used a model in which a virtual facilitator delivered therapy to participants gathered in-person, while the other two employed a physically facilitated approach where participants could attend either in person

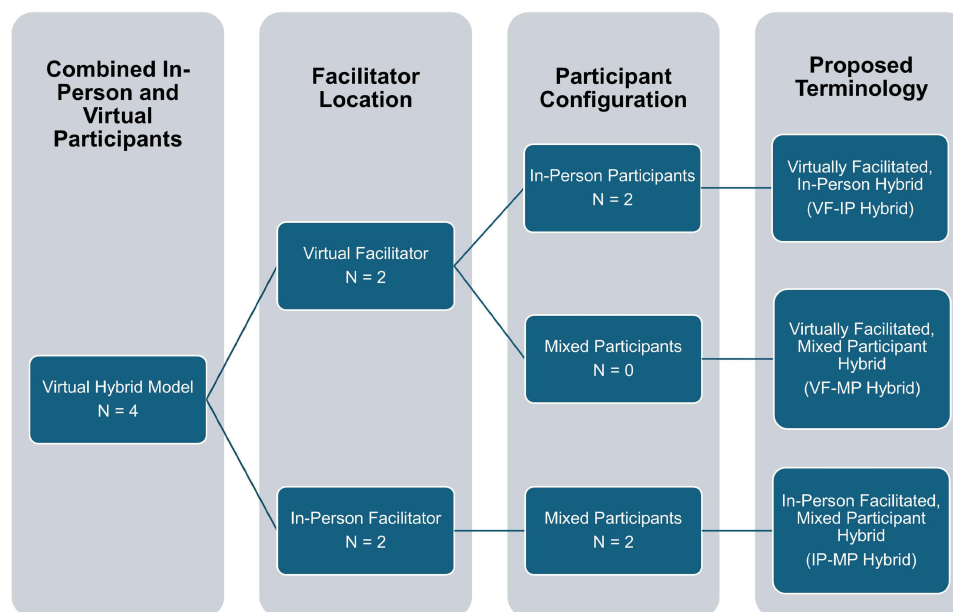


Figure 2 Possible combinations of facilitator and participant location in SUD hybrid group therapy. N = number of articles utilizing a particular model. 4 articles were identified in a systematic review as utilizing a hybrid delivery model for SUD treatment (ie, group members were both in-person and virtual). These articles could first be categorized by the location that group facilitators were conducting therapy. Further categorization noted that group participants (ie, those receiving the therapy) could be in-person if the group was virtually facilitated. Participants could be both in-person and virtual (ie, mixed participants) regardless of facilitator location.

or virtually. Quantitative outcomes indicated that the models were associated with quality-of-life improvements and treatment completion rates comparable to in-person groups, and in some cases, superior to virtual-only formats.^{13,15} Moreover, survey data from one study demonstrated that patient satisfaction, perceived therapeutic alliance, group cohesion, and treatment insight were similar to those observed in in-person settings, while virtual-only groups scored significantly lower on several aspects.¹⁶ Collectively, these findings suggest that integrating in-person and virtual formats within a single SUD group may be an effective treatment model that leverages the benefits of both delivery approaches.

Although this combined format lacked a clear name in some of the articles, the most common descriptive used was “hybrid”. Confusion remains, however, as “hybrid care” in mental health has also been used to describe the combination of individual in-person or telehealth visits supplemented with asynchronous tools (eg, phones or wearable devices).¹⁷ Based on the definitions used in the extracted articles, a virtual “hybrid” delivery to SUD therapy groups is distinct from “hybrid care”. Specifically, a virtual hybrid SUD therapy group (although varying in format) is defined by one commonality: at least one group member, either the group facilitator or one of the participants attended groups in-person with at least one member attending virtually. In non-SUD therapy groups, a group can also be defined as hybrid when “some group participants join online while others are physically in the same room”.¹⁸ This is consistent with our definition.

While the reviewed articles generally aligned with the concept of a virtual hybrid model, the terminology used to describe hybrid subtypes varied considerably. To provide a consistent foundation for future research and facilitate clearer comparisons across studies, we propose the following standardized nomenclature that categorizes hybrid models based on the configuration of facilitator and participant locations:

1. Virtually Facilitated, In-Person Hybrid (VF-IP Hybrid): The facilitator is remote, and all participants are located together in person.
2. Virtually Facilitated, Mixed Participant Hybrid (VF-MP Hybrid): The facilitator is remote, and participants attend through a mix of in-person and virtual formats.
3. In-Person Facilitated, Mixed Participant Hybrid (IP-MP Hybrid): The facilitator is physically present, and participants attend through a mix of in-person and virtual formats.

The nomenclature provides a systematic method for describing hybrid model subtypes, supporting clearer communication, enhancing study design and reporting, and fostering shared language to guide future innovation in SUD treatment delivery.

The virtual hybrid SUD group therapy models in the cases reviewed emerged in response to the growing adoption of telehealth. As behavioral health and SUD treatments increasingly transition to virtual platforms,^{4,19} it is feasible for SUD group therapy to be facilitated entirely online. However, clear guidelines are essential to foster a productive virtual therapy environment and address potential challenges.¹⁴ These guidelines should encompass strategies for resolving basic technical issues, such as audio problems or headphone usage, as well as more nuanced considerations, like promoting active engagement in group activities and maintaining therapeutic effectiveness.

Once it is determined that a facilitator will be virtual, the next consideration to be made is where the group's participants will be receiving care. For the articles that utilized a VF-IP Hybrid model, patients were receiving care at a residential treatment facility. This meant that group members were already physically together and could receive virtual treatment in the same room without difficulty. In situations where group participants can conveniently gather in person, a hybrid model with virtual facilitation and physical attendance becomes a viable option. Outcomes for this model, although only reported by one article, are suggestive of SUD treatment completion and satisfaction comparable to in-person only SUD models. More studies will be necessary to confirm and further explore if these results can be replicated.

The VF-IP Hybrid model could be adapted to introduce virtual attendees as well. Unfortunately, there is no current research involving this type of model. Situations that could prove beneficial for its utilization would be ones where not all attendees have equal access to physical SUD treatment, as can be seen with geographical disparities in trained providers.²⁰ Practicing this model would increase the delivery options for groups allowing for patients to participate in their recovery in whatever manner they are most comfortable in. In this sense, exploring this model option would promote a person-centered approach to SUD treatment.²¹

IP-MP Hybrid models are similar to traditional in-person SUD groups but with flexibility on how participants would like to attend. While research on this type of model is limited, adding an in-person component to virtual groups may promote its success. Indeed, SUD patients in IP-MP Hybrid therapy have shown greater satisfaction, perceived therapeutic alliance, group cohesiveness, and treatment insight when compared to virtual-only groups, as well as comparable results to in-person groups.¹⁶ Evidence further supporting the model was greater odds of completed treatment in physically facilitated SUD hybrid groups compared to virtual-only groups.¹⁵ This would suggest that the disadvantages of virtual-only groups can be overcome by the presence of in-person members that is inherent to the hybrid model. Augmenting virtual groups in this manner is beneficial as the virtual component itself can help some participants feel less vulnerable and more open to group therapy.¹⁸ These preliminary findings raise hope that the IP-MP Hybrid model can have the established benefits of traditional in-person therapy while also taking advantage of the positive aspects of virtual therapy.

Preliminary Recommendations for Virtual Hybrid SUD Group Facilitation

While all forms of group facilitation require careful attention to conditions that foster optimal group functioning and dynamics, facilitating effective hybrid SUD groups demands additional considerations to ensure both in-person and virtual participants can achieve positive outcomes. Drawing from both the included studies and the authors' clinical experience, several key recommendations can guide implementation.

First, organizations planning to implement hybrid SUD services must prioritize a room setup and technology that supports seamless interaction between in-person and virtual participants. The physical arrangement of in-person participants should allow everyone to see and hear virtual participants clearly, and vice-versa.¹⁴ For example, when using a television to display virtual participants' faces, the screen should be placed so that all in-person group members have an unobstructed view. In many in-person SUD therapy groups, participants sit in a circle or around a large table. Positioning the television to integrate virtual participants within the circle or table arrangement can help mimic a cohesive group dynamic.¹⁵ To further enhance engagement for virtual participants, technology that tracks conversations across the room is highly beneficial. Tools such as 360-degree cameras, microphones, and speakers enable virtual participants to not only hear in-person participants but also observe their facial expressions and body language, creating a richer, more interactive experience.

Second, SUD hybrid group facilitators must be prepared with strategies to ensure equitable engagement and participation from in-person and virtual participants. A common challenge in hybrid groups is the tendency for facilitators and in-person participants to become engrossed in face-to-face conversations, inadvertently excluding virtual participants. On the other hand, in-person participants may feel disregard or jealousy toward their virtual peers who take away facilitator time and attention.¹⁸ To prevent this, hybrid SUD groups may be co-facilitated. This setup allows for one facilitator to focus primarily on in-person participants, while the other ensures that virtual participants are equally engaged. If conversation becomes disproportionately centered on one group, the facilitator responsible for the quieter group can redirect focus by asking targeted questions or explicitly inviting input.

For virtual participants, some may prefer to use chat functionalities available through virtual platforms. The facilitator monitoring virtual engagement can incorporate chat comments and questions into the group discussion to ensure those participants' contributions are heard. Another approach to fostering balanced engagement is incorporating structured activities that require participation from all group members. For example, facilitators can ask each participant to respond to a specific question or complete a brief individual activity as part of group session. Special consideration should also be given to the use of engaging visual materials (eg, whiteboards, multimedia, handouts) in a hybrid setting while ensuring that their quality is not diminished for virtual participants.¹⁴

Finally, SUD hybrid group facilitators should develop a plan to address treatment-interfering behaviors among both in-person and virtual participants. Behaviors like disengagement, crosstalk, or conflicts between group members can be challenging to manage and may be amplified in a hybrid format. Kneeland et al recommend that facilitators should decide in advance the "ground rules" for speaking and how counterproductive behaviors will be addressed to maintain a productive group environment. Additionally, providers are encouraged to seek real-time feedback from patients in order avoid group mishaps.¹⁴ Gathering input on group dynamics and overall effectiveness from the participants' perspective can help identify what is working well and what could be improved, fostering continuous refinement of the approach.

Future Directions

Hybrid models for SUD group therapy are poised to become increasingly relevant as virtual care continues to expand across medical practice. While preliminary evidence suggests that hybrid group therapy may offer outcomes comparable to in-person treatment—and in some aspects, potentially superior to virtual-only formats—the current literature in the SUD context remains limited. Future studies should directly compare hybrid, in-person, and virtual-only delivery models using larger samples and robust, controlled designs. Research should assess both short- and long-term clinical outcomes (eg, abstinence, relapse prevention) and qualitative dimensions of care (eg, satisfaction, group cohesion, and engagement). In addition, investigations into which hybrid formats—such as virtual vs in-person facilitation or mixed-location vs all-in-person group composition—yield the greatest benefit for specific SUD populations are needed. Treatment settings may vary in their capacity to implement different models effectively, and identifying these contextual factors will be essential for optimizing hybrid care in routine clinical practice. Finally, research is needed to understand how emerging technologies like mobile phone applications can complement hybrid, in-person, and virtual-only delivery models.^{22,23}

Limitations

Virtual hybrid group-based care remains a relatively new modality in SUD treatment, and the current evidence base is limited. Only four studies met inclusion criteria for this review, reflecting the early stage of research in this area. Study design and comparator groups varied across the included articles. For example, one study compared hybrid care only to in-person treatment, while others also included virtual-only groups. Sample sizes were modest in some cases and may not have been adequately powered to detect subgroup differences or draw definitive conclusions. Additionally, the heterogeneity in SUD diagnoses among study populations may limit the applicability of findings to specific SUD subgroups. These methodological limitations reduce the overall robustness and generalizability of the existing evidence. As hybrid models continue to be adopted, there is a critical need for well-powered, rigorously designed studies to validate and expand upon these preliminary findings.

Conclusions

This scoping review identified instances of SUD group therapy in which at least one participant attended in-person and at least one participated virtually. Results were used to help define what a virtual hybrid model is in the context of SUD treatment. Although the number of studies was limited, available evidence suggests that hybrid models yield outcomes comparable to in-person groups and may outperform aspects of virtual-only formats. These models offer the flexibility of virtual care while retaining in-person elements that may help offset limitations of fully virtual therapy. Given the novelty of this treatment approach, careful attention is needed to ensure hybrid models are implemented effectively and equitably. Establishing and adopting a consensus definition of virtual hybrid care may help standardize terminology, enhance clarity in research and clinical practice, and support more coordinated evaluation of outcomes across studies. Additional high-quality research is essential to assess the broader applicability of hybrid models in SUD treatment and to determine whether the promising outcomes observed to date can be replicated across diverse settings and populations.

Disclosure

The authors report no conflicts of interest in this work.

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