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BRIEF RESEARCH REPORT

Physician Wellness

The use of peer support groups for emergency physicians during the COVID-19 pandemic

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Abstract

Objective: To test the feasibility, receptivity, and preliminary effectiveness of peer support groups for emergency medicine physicians during the COVID-19 pandemic and gain a better understanding of their experiences with peer support.

Methods: This pilot study used a quasi-experimental design to assess change in symptoms of distress, anxiety, depression and burn-out before and after participating in a virtual, group-based peer support intervention for a duration of 8 weeks. Pre-post change analyses were performed using two-sided, paired *t* tests. Feasibility was measured by attendance data to demonstrate the use of the intervention. Receptivity was measured using a global change rating and net promoter score at the end of each session and 8-week period, respectively. During the final session, qualitative data on physician experience was collected and then analyzed using conventional content analysis.

Results: Twenty-four emergency medicine physicians participated in the pilot study. The attendance goal was met by 20 (24, 83%) physicians and 19 (22, 86%) physicians reported they would recommend peer support groups to a friend of colleague. Positive standardized response mean effect sizes indicated modest improvement in nine of 12 symptom measurements with marginal significance ($p < 0.10$) for improvement in guilt [20, Effect Size (ES) = 0.45] and depression (21, ES = 0.39). Qualitative findings revealed high overall benefit with few adverse impacts of participation.

Conclusions: Results demonstrate high physician receptivity, feasibility, and benefit from participation in peer support groups. Promising signs of improvement in distress, anxiety, depression, and burn out symptoms warrant additional studies with larger sample sizes and more robust research designs to establish the evidence base for peer support in the physician population.

KEYWORDS
peer support, physician wellness, physician mental health

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1 | INTRODUCTION

1.1 | Background

There is broad consensus that levels of anxiety, depression, burnout, and suicide risk in the physician population are unacceptably high and have been exacerbated by the recent COVID-19 pandemic.[1] At the same time, historically low uptake of mental health resources in this population persists.[1,2] In response, the American College of Emergency Physicians led a joint statement advocating for reduced barriers to access and increased use of mental health services and supports, specifically peer support interventions.[3]

Group-based peer support interventions have proven effective for addressing common mental health problems.[4] Although there is a strong case for use of peer support interventions in the physician population,[5] there is less known about the implementation and effectiveness of peer support groups among physicians and particularly during a pandemic such as COVID-19. Furthermore, the structure of peer support interventions (when described) varies widely as well as the mode of delivery.[6]

1.2 | Importance

Improving support for the mental health and well-being of emergency medicine physicians is not only needed to respond to future public health emergencies, but also to address post-pandemic attrition from the health care workforce[7] and contain predicted shortages of emergency medicine physicians.[8] Peer support may be a viable option to do so; however, optimal implementation and effectiveness have not been clearly established. Our study contributes to needed literature on scalable, rapidly deployable, and timely peer support interventions that are both effective and well received by physicians both during and beyond the pandemic.

1.3 | Goals of this investigation

The primary objective of this pilot study was to test the feasibility, receptivity, and preliminary effectiveness of peer support groups on anxiety, depression, distress, and burn out using an established peer support model. Our secondary objective was to gain a deeper understanding of the physicians' experience with the peer support groups including (1) perceived benefits and adverse impacts, (2) barriers and facilitators to participation, and (3) recommendations for improvement in future groups.

The Bottom Line

Peer support groups have high physician receptivity and feasibility. In a sample of 24 emergency medicine physicians who participated in physician peer support groups during the COVID-19 pandemic, 19 (22, 86%) said they would recommend them to a friend or colleague. Peer support groups may be a viable option to support the mental health and well-being of physicians.

2 | METHODS

2.1 | Study design, population, and setting

This pilot study used a quasi-experimental design to assess changes in common mental health symptoms before and after participating in a virtual, group-based peer support intervention each week for a duration of 8 weeks. In addition, quantitative and qualitative methods were used to assess feasibility and receptivity to the intervention and experience with participation at the end of the 8-week period. The study population of emergency medicine physicians included faculty, residents, and fellows in a department of emergency medicine within a large academic health care system. The study was approved under expedited review by the academic institutional review board and conducted from August to October 2020.

2.2 | Selection of participants

The study was advertised through an announcement during departmental meetings by a physician champion and a recruitment flyer was circulated via departmental email listservs. Enrollment of a convenience sample during the pilot phase was capped at 24 on a first-come, first-serve basis. Eligibility for participation included being an emergency medicine physician who self-identified as having any mental health challenge during the COVID-19 pandemic. The primary exclusion criteria were suicidal thoughts or intent for which a higher level of formal mental health services is recommended. The last question from the 9-item Patient Health Questionnaire (PHQ)[9] was used to screen for suicidal ideation. In addition, any physician who served in a supervisory capacity to other group members was excluded due to the sensitive nature regarding self-disclosure of mental health challenges. Enrolled participants were assigned to 1 of 3 virtual peer support groups based on availability and preference for day and time of meetings.

2.3 | Intervention

The primary purpose of the support group was to allow participants the time and space to share their COVID experiences. To avoid being overly prescriptive, participants could talk about any experience related to work, family, or social life during the pandemic. The structure and processes of the peer support group sessions were adapted locally from the National Alliance on Mental Illness (NAMI) peer support model and included: (1) a brief 2- to 3-min check in of what each participant was

currently experiencing, (2) transition to group discussion of common and urgent issues, and (3) a closing portion focused on sharing positive action plans or other inspirational thoughts. Each group was led by an experienced (non-clinician) peer support group leader and 1 of 3 trained emergency medicine physician co-facilitators. The executive director of the local NAMI affiliate, a trained and experienced support group leader who supervises all volunteer peer support group facilitators, functioned in the role of the non-clinician peer support group leader and trained the 3 emergency medicine physician co-facilitators using the NAMI peer support model. Co-facilitator training included familiarization with the peer support model, using supportive communication strategies, and responding to highly distressful or traumatic events discussed during group sessions. In addition, we used the "first follower principle"[10] to expedite implementation through role modeling and experiential learning. Hence, physician co-facilitators learned by watching the experienced peer support group leader and were encouraged to follow and take a more active lead in guiding group processes over time.

2.4 | Outcomes and measures

Study measures are summarized in Appendix Table A1. The primary outcome of anxiety and depression symptoms were measured by the 4-item PHQ consisting of the 2-item depression measure (PHQ-2) and 2-item anxiety measure (GAD-2). These 2 subscales and the overall PHQ-4 score have established sensitivity to change following treatment.[11] Pilot studies are typically powered to detect only large effect sizes. We planned for a sample size of at least 16 physicians with 2 time points, to provide 85% power, at 0.05 α, to detect a large effect size of 0.80 mean change in SD units. The obtained sample of 20 physicians who completed both pre- and post-intervention measures for all outcomes, provided 92% power. Secondary outcomes included symptoms of distress and burnout. Feasibility, a common implementation outcome, was measured by attendance rates (i.e., study participation).[12] Receptivity was quantitatively assessed using a net promoter score (NPS),[13] and a global change rating.[14] The single NPS question used was, "Would you recommend provider peer support groups to a friend or colleague?" The global change rating measured how participants felt at the end of each session compared to the beginning using a scale ranging from 1 or "much worse" to 7 or "much better."

2.5 | Data collection and analysis

Quantitative data was collected during group sessions using a polling function of the secure videoconferencing platform. All pre-post change analyses on primary and secondary outcome measures were performed using 2-sided paired *t* tests. The standardized response mean (SRM) was reported as the outcome effect size (ES), calculated as mean change divided by SD of change. Quantitative data was analyzed using SPSS.

During the final group session, participants were asked several questions to obtain data to address the secondary aim. Questions addressed perceived benefits from participation, changes in thoughts or behaviors, perceived support by colleagues, challenges to participation, and recommendations for future improvement. Audio recordings were transcribed and analyzed using conventional content analysis.[15] Three team members read the transcripts in their entirety to become familiar with the overall tenor and focus of the group sessions. Each team member was assigned a transcript to code independently. Another team member verified the codes with a re-examination of the data, and minor coding discrepancies were easily resolved through discussion. The team members independently clustered similar codes into categories and then met as a group to determine a final set of categories for each component of the secondary aim through a process of discussion and consensus.

3 | RESULTS

3.1 | Characteristics of study subjects

Of the 157 emergency medicine physicians approached to participate, we reached our target enrollment of 24 physicians within 2 days of recruitment via email listserv. Of the 24 enrolled physicians, 19 were faculty physicians (24, 79%), 22 were White (24, 91%), 23 were female (24, 96%), and 15 were in practice for 5 years or less (24, 63%). At baseline, the majority of participants screened mild to moderate for anxiety and depression and 10% screened positive for clinically significant symptoms of anxiety and depression (Appendix Table A1). The most bothersome distress symptoms were fatigue, guilt, nervousness, trouble sleeping, and low mood. Levels of burnout at baseline were moderate to high.

3.2 | Feasibility and receptivity

Average attendance was 6.5 sessions (minimum, 4; maximum, 8), and 20 (24, 83%) physicians met the attendance goal of 6 out of 8 sessions. Participant receptivity to the intervention was high as measured by the NPS, and 19 (22, 86%) physicians reported they would recommend physician peer support groups to a friend or colleague. In addition, participants consistently felt better following the peer support group sessions and averaged 6 or "moderately better" across 2 groups and 5 or "a little better" in 1 group on the global change rating. Only 2 members of the latter group ever reported "feeling a little worse" at the end of a session.

3.3 | Effectiveness

There was no significant change in the primary outcome of anxiety and depression (Table 1). However, positive effect sizes (ES or SRMs) showed promising preliminary results, albeit small, for 9 of 12

TABLE 1 Pre- and post-intervention change analysis of primary and secondary outcomes

Symptoms	No.	Mean score change	SD of change	SEM of change	SRM[a]	95% CI for the SRM		Sig. (2-tailed), $p < 0.05$[b]
						Lower	Upper	
Anxiety and depression (PHQ-4 score)	21	0.81	2.62	0.57	0.31	−0.13	0.74	0.17
Depression (PHQ-2)	21	0.52	1.33	0.29	0.39	−0.05	0.83	0.08
Anxiety (GAD-2)	21	0.29	1.55	0.34	0.18	−0.25	0.61	0.41
Guilt	20	1.23	2.75	0.61	0.45	−0.02	0.90	0.06
Trouble sleeping	20	0.65	1.84	0.41	0.35	−0.10	0.80	0.13
Fatigue	20	0.8	2.53	0.56	0.32	−0.14	0.76	0.17
Low mood	20	0.55	1.96	0.44	0.28	−0.17	0.72	0.23
Nervousness	20	0.45	2.09	0.47	0.22	−0.23	0.66	0.35
Difficulty concentrating	20	0	1.26	0.28	0	−0.44	0.44	1
Helplessness	20	−0.15	1.76	0.39	−0.08	−0.52	0.35	0.71
Anger	20	−0.15	1.53	0.34	−0.1	−0.54	0.34	0.67
Burnout	21	0.05	1.16	0.25	0.04	−0.39	0.47	0.85

Abbreviations: CI, confidence interval; GAD, Generalized anxiety disorder; SEM, standard error of the mean; SRM, standardized response mean.
[a]SRM is the mean score change divided by SD of change. The SRM is a measure of effect size (ES, for which 0.2, 0.5, and 0.8 represent thresholds for small, moderate, and large effects, respectively.
[b]The *p* values are derived from paired *t* tests.

symptoms measurements. The changes in guilt (20, ES = 0.45) and depression (21, ES = 0.39) symptoms reached a level of marginal significance ($p < 0.10$). SRMs can approximately be interpreted using Cohen *d* guidelines wherein 0.20, 0.50, and 0.80 represent thresholds for small, medium, and large effect sizes, respectively. Furthermore, marginal significance ($p < 0.10$) was shown for symptoms of guilt and depression.

3.4 | Qualitative findings

Twenty-two physicians participated in the qualitative feedback sessions. The participants discussed 4 benefits and 2 adverse effects of group participation, 3 facilitators and 4 barriers to group participation, and 5 recommendations to improve future groups (Table 2). Members of all groups discussed benefits that included learning from others, enjoying social interaction, and feeling supported by others. Members of 1 group also identified the benefit of processing thoughts and feelings. Conversely, 3 participants in 1 of the groups noted adverse impacts including feeling worse due to the group's focus on difficulties and 1 participant in a different group reported feeling responsible for fixing other members' problems.

Participants identified several factors that facilitated participation in the groups including a group structure that encouraged participation by all members and skilled leaders who guided the group processes from check-in to discussion. The participants also indicated facilitators including their willingness to share and invest time in self-care. On the other hand, 2 participants in 1 group noted that a barrier to participation was having negative thoughts, such as the idea that talking about COVID was seen as being weak or complaining. Participants noted other barriers such as censoring input due to hierarchical relationships within the group; not having enough time, such that participation became burdensome; and preference for talking to their personal support networks.

Although systematically comparing the 3 groups was beyond the scope of this study, the 3 team members who conducted the qualitative analysis did observe some manifest differences in the groups' responses to the intervention that are worth noting. Two of the groups focused almost exclusively on positive experiences. Although some members of these groups mentioned a few adverse effects and barriers, they all affirmed the value of the group experience. The other group, however, had a few members who were more critical of their group experiences. These members focused mostly on adverse experiences and barriers. Moreover, the only benefit identified by this group was the enjoyment of social interactions, and no one in the group mentioned the benefit of having group structure and skilled leaders.

There was consensus among participants' recommendations to optimize groups by having them be the right size (ie, not too big or too small) and include members with varying perspectives. A few participants agreed with a recommendation to meet bi-monthly or monthly rather than weekly, and several participants agreed that flexibility due to periodic changes to their work schedules was needed. One participant recommended progressing toward a solely physician-led group and another recommended focusing on taking action as a group toward system-level change. Moreover, although consensus was achieved among participants in one group that recommended having consistent group membership to enhance trust, a few members in another group recommended open groups with a drop-in option and flexible scheduling.

TABLE 2 Categories derived from codes

Area	Categories	Description	Exemplar quotes
Benefit	Processing thoughts and feelings	Talking about, reflecting on, and normalizing thoughts and feelings	"Talking about things other people [in the group] understand is quite cathartic regardless of what happened throughout the week. And some of the things I can't talk about with our spouses or significant others or colleagues on shift." (Group 3, 002)
			"Something always comes up where I'm like, 'Oh yeah, I do feel that way'. Sometimes I don't even realize it, that that is what is bothering me. Or someone puts to words what I am feeling in a way that I am like 'Oh that is exactly right, I just hadn't thought of it that way'." (Group 3, 006)
			"Something that has been really positive too is realizing that there is a uniformity in some of the things that we are anxious about and some of the things we are going through. So normalizing that takes the sting out of it a little bit. It doesn't go away I mean but it definitely makes it a little less painful to carry around on your own." (Group 3, 005)
	Learning from others	Sharing information about coping strategies and getting advice from people at different points in their careers	"I think a lot of the stuff we talked about surrounding tricks for getting better sleep have been really helpful and I feel like when I'm struggling instead of getting in the spiral of 'I can't sleep, what am I going to do' that now I feel like I have a toolkit of like things I can track to redirect and get to sleep." (Group 1, 009)
	Enjoying social interaction	Connecting with others, talking about fun things, and developing camaraderie	"For me it's been the connection you know, I am mostly at home these days, and this is a way to connect with professional women. I look forward to it on a weekly basis because I know I get to see all of you beautiful people. (Group 1, 006)
			"I'm trying to open this thing of soy sauce with hemostats because I can't get it open." (Group 2, 004)
			"There's automatically that camaraderie of saying hey, like we've been there, too. We get it. We understand when you're exhausted. We understand when you're tired, and you feel like you can't do that next thing. And being able to have you know, other people to bounce ideas off, I think is a very beneficial thing. (Group 1, 010)
	Feeling supported by others	Receiving emotional support while talking about COVID and non-COVID challenges	"I was feeling supported with the stresses of work, covid–I mean it's kind of all covid-related now, but covid and 'non-covid' related issues. And then also specifically felt pretty supported when I was talking about being a family member but also a provider when you're taking care of a family member, especially during COVID times when there's only one person allowed to be there. And then also talking about my daughter with what she went through with her vaccine reaction and feeling self-conscious about being a parent and also a pediatrician and feeling anxious about her vaccines and things and feeling very supported talking through the situations. It was amazing and I think about it a lot. I think about it every day– These conversations that we have." (Group 3, 005)
Adverse impacts	Feeling worse	Talking about the tough stuff leads to being in a bad space	"Especially early on, there was this sort of forced emphasis on what's hard and difficult and tough in life. And I don't know that that's how most of us sort of go through the world, it seemed very forced, it ended up making me feel negative and in a bad space, as opposed to happy and later in the times that we sort of talked… but largely just talk without any kind of agenda. I felt a lot happier at the end, um, because I got to learn about people, and we got to connect around things that weren't necessarily like, things suck. And isn't that terrible?" (Group 2, 004)
	Feeling responsible	Wanting to fix problems	"I have had a little bit of maybe anxiety and the director role with check ins and things like that because I tend to take on these issues that are brought up and want to fix all of them so that the job is better and less stressful for everybody." (Group 3, 004)

(Continues)

TABLE 2 (Continued)

Area	Categories	Description	Exemplar quotes
Facilitators to participation	Having structure and skilled leaders	Taking turns checking in, identifying topics to discuss, and leaders guiding the process	"I also like that it is structured. It encourages participation and reflection by everyone." (Group 3, 006)
			"There was something really nice about just being able to like check in, 'how are you doing', 'how was your weekend'. Check in takes 4 to 5 minutes and then you [group] talk about what you need to&And [group leader] listens to everyone very intently, and you pick up on these like very little nuanced things. And you're like, let's talk about that more, because that was a lot. And then obviously, someone has a lot to say about it, and you just find the string, and then it kind of opens from there." (Group 1, 005)
	Being willing to share	Having a safe space, being able to be vulnerable, and having a group you can trust	"Many moons ago when I was an intern, we had a pretty tight intern class and we actually scheduled a monthly lunch for just interns. That was the first experience I had with a regular safe group/save space/check-in with my peers… it's just really interesting that even though so valuable then, it never occurred to me, 'oh this would be something good to continue'. I have definitely appreciated this group." (Group 3, 008)
			"Just being a little more transparent and allowing myself to be a little more vulnerable, not just for myself but knowing that it might help that other person have a better day too." (Group 3, 005)
			"A kind of knowing that there is a support group, like I kinda look forward to this every week. I mean this has been a tough week, I've been looking forward to talking about it with a peer group that I trust." (Group 3, 006)
	Investing time	Scheduling time for self-care	"For me it's been an already scheduled time for me to take more for myself to try to reflect a bit more on what's been going on just in general in my life. And I think without having that schedule time a lot of times I push that reflection and, you know, box things up even more and not able to analyze them and kin get through them. So having a time on the calendar and I know this is what I'm doing and nothing else is getting scheduled and allows me to take that time for myself." (Group 3, 004)
Barriers to participation	Having negative thoughts	Talking about COVID is seen as being weak or complaining	"I think we had it kind of geared around Covid conversations. And that often turns into a negative spiral of like, woe is me. And so sometimes we can fall trap to that very easily. You can always find something to complain about. There's just like, a little extra the normal currently. So I felt actually, that was kind of, I never really talked about Covid because I think that that led often to me being like, more depressed about that topic." (Group 2, 005)
	Censoring input	Holding back because of hierarchical relationships in group	"I imagine that there might be things that you might not want to say, because technically, I'm someone's boss, or that others might not want to say, because we're their faculty or she might not want to say because she's a program director, you know, like. So, I think, I think you do have to recognize that when you put when you then put all of those folks in a space and say, 'tell us the hardest things that are happening right now', there's gonna be some censorship because people are worried about, about some of those boundaries or about offending somebody else, or about, you know, who knows what." (Group 2, 004)
	Not having time	Participation time perceived as burdensome	"I don't know that like, I think the problem is with the nature of what we do. There's no time like any of the times that were put forth, you're never going to be able to do that for weeks in a row… And not feel some kind of stress." (Group 2, 009)
			"There was one week where I found it really helpful. It felt like just a good thing to be able to talk. But then after that, it became more of a burden. I think that was more of a job. Like there's nothing really wrong. And I didn't want to incorporate something when you're like, life's fine, I'm having a great time, I'm at dinner." (Group 2, 002)
	Preferring personal support networks	Want to talk about challenging or personal things with individuals you know and trust already	"And I think for the hard stuff, I'm fortunate to have kind of other built-in systems, and a lot of it has to do with trust."(Group 2, 005)

(Continues)

TABLE 2 (Continued)

Area	Categories	Description	Exemplar quotes
Recommendations	Optimizing groups	Optimizing group size, having variety of perspectives, and maintaining group consistency	"There's a tipping point. If it is too small, then you feel really exposed. If it's too big, you can just hide." (Group 3, 005) "I don't know that our paths would have crossed otherwise. And I loved having these conversations that I don't know would have been had any other way because we may not work together or otherwise see each other at events. So I love meeting all of you guys and having different perspectives on everything." (Group 3, 006) "I think the consistency of the group is key actually. I think I became more comfortable talking about different things because I felt some element of trust there is hard to get to know people a little bit. In fact, when I had to miss, I got invited to go to other groups but I didn't go because I felt like I would've been an interloper. So yeah I think consistency is important." (Group 3, 008)
Recommendations	Optimizing meeting frequency	Meeting less than weekly and adapting to changing schedules	"I think that, at least from my schedule, every other week would probably be fine or even once a month would probably be fine. But I agree I like the idea of continuing." (Group 3, 004) "I will say when I put up what I could do, I only looked at the next 8 weeks and which one I could make the most of … but I don't know if the next two months I'll be on Friday morning shifts. So I think that variability in our schedule might make it a little tricky." (Group 3, 003) "And I would love to go forward with it as well and having a less frequent might allow more people to participate but I think the one risk with that is if we don't meet frequently enough there will be that awkwardness of, 'Oh gosh, I haven't talked to you guys in a month. I've kinda forgotten how do we interact with each other'." (Group 3, 005)
	Having physician peers lead	Increasing relevance of common topics discussed	"I think it would be easier to have a leader that is exactly a peer and they would know what topics that are common. It was like we were just trying to come up with things that would have been a common scenario. But having a leader that was exactly your peer would make it easier." (Group 3, 009)
	Taking action	Moving toward group action/advocacy	"Since we're being open and talking about it and we see patterns now, my brain is now moving towards what can we do to make this better." (Group 3, 006)
	Having options	Offering a drop in option, open groups, and flexible scheduling	"So maybe the groups being the same is really important factor of it. But I actually think if you just had like, three or four times a week happening, 'hey, here's an open zoom invite, like zoom in this week' … people could just selectively go into any group." (Group 2, 005)

3.5 | Limitations

Limitations include a small sample and lack of random assignment to a control group. Larger future randomized controlled trials should be powered to detect effect sizes and greater confidence in intervention causal attribution. Furthermore, although the SRM effect size has intuitive appeal, it is possible that minor to moderate violations of normality in change scores would also make a median-based statistic appealing. In addition, the self-identifying aspect of eligibility resulted in some physicians with low to moderate levels of anxiety or depression, whereas the support group intervention might have a greater impact among physicians with at least moderate distress. Finally, the findings in this pilot study are limited to a homogeneous sample of predominantly White, female physicians. Willingness to participate likely differs by gender and may differ by race. Further research should explore receptivity to peer support among male and non-White physicians. Gender and race may also be important co-variates in larger, randomized effectiveness studies of peer support.

4 | DISCUSSION

This study demonstrates feasibility and good overall receptivity to a peer support group intervention based on high attendance, high participant-reported rates of feeling better after sessions, and willingness to recommend peer support groups to colleagues. Furthermore, positive small effects on symptoms of depression, anxiety, and distress (e.g., guilt) suggest promising signs of preliminary effectiveness. Quantitative findings were enhanced by qualitative findings of an overall positive experience by the majority of participants. Benefits reported including learning from others, enjoying social interaction, feeling supported by others, and processing thoughts and feelings. These findings are well aligned with existing peer support literature demonstrating improved psychological and social functioning as well as empathy and comradery.[16]

The barriers and facilitators of participation reported in this study have been discussed by well-seasoned thought leaders in the area of peer support use in the physician population.[17] For example, negative thoughts, such as that talking about COVID was a sign of weakness or complaining, or feeling burdened by the time spent in group, may be related to what is described in the literature as the "dark side" of the culture of medicine. This culture includes denial of physicians' mental health and emotional needs and internalization of self-care as selfishness. Our findings suggest that peer support can mitigate these cultural factors by providing physicians a space of psychological safety to talk about challenges without the need to fix their problems or suppress their emotions.

Differences in group experience may have impacted study results. Reported adverse effects of feeling worse were limited to members of one group and were corroborated by lower overall Patient Global Impression of Change (PGIC) ratings within the same group. Furthermore, the three individuals who reported they would not recommend peer support to a colleague or friend were all from the same group that reported adverse effects and lower PGIC ratings. Based on research team observations of multiple sessions over time, we theorize that negative thoughts expressed by one or more dominant group members can impede whole group function by inhibiting willingness to talk about and process the "tough stuff" as well as derailing discussions to off-topic conversation of equal importance is how facilitators respond during challenging group dynamics.

Finally, the most frequent recommendations for improving future groups were related to optimizing the scheduling of the groups. Toward that end, periodic reassessments of preferred group frequency are recommended. Moreover, group scheduling needs to be flexible enough to adapt to environmental demands and changing work schedules of the physicians. Another less frequent but important recommendation was moving the groups toward discussions of action or advocacy on system-level problems. Such a group focus could mitigate individual feelings of responsibility to "fix things" and close the session on a positive note with a sense of hope or optimism.

AUTHOR CONTRIBUTIONS

Jill Nault Connors, Julie Welch, Julie Hayden, and Kurt Kroenke conceived the study and designed the trial. Jill Nault Connors obtained research funding. Jill Nault Connors and Julie Hayden supervised the conduct of the trial. Tanner Thornsberry was responsible for data collection, management, and analysis with supervision and quality control by Jill Nault Connors. Patrick O. Monahan provided statistical advice. Jill Nault Connors, Claire Draucker, and Sally Wasmuth analyzed the qualitative data led by Claire Draucker. Julie Hayden, Julie Welch, Heather Kelker, and Anne Whitehead led the peer support groups. Jill Nault Connors and Tanner Thornsberry drafted the manuscript and all authors contributed to the editing, revising, and final version. Jill Nault Connors and Julie Welch take responsibility for the article as a whole.

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CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

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APPENDIX A

TABLE A1 Baseline data ($n = 24$ participants)

Outcome measure (score range)	Mean (SD)
Primary	
PHQ-4 depression and anxiety [0–12][a]	3.04 (2.79)
Secondary	
PHQ-2 depression [0–6]	1.92 (1.50)
GAD-2 anxiety [0–6]	1.13 (1.48)
Burnout [0–6][b]	2.54 (1.18)
Distress symptoms[c]	
Fatigue (0–9)	4.38 (2.00)
Guilt (0–9)	3.98 (3.20)
Nervousness (0–9)	3.54 (2.41)
Trouble sleeping (0–9)	3.08 (2.37)
Low mood (0–9)	2.92 (2.34)
Difficulty concentrating (0–9)	2.54 (2.45)
Anger (0–9)	1.88 (1.65)
Helplessness (0–9)	1.58 (1.91)

Abbreviations: PHQ, patient health questionnaire; GAD, generalized anxiety disorder.

[a]Positive screen is 6 or greater on PHQ-4.

[b]High levels of burnout is defined as 4 or greater on the Maslach Burnout Inventory.

[c]Distress symptoms include items from the SPADE Symptom Screener plus items drawn from the PROMIS measures selected with input from physicians relevant to their experiences.