Context before implementation: a qualitative study of decision makers' views of a peer-led healthy lifestyle intervention for people with serious mental illness in supportive housing

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Abstract

People with serious mental illness die at an earlier age than people in the general population largely due to cardiovascular disease. Healthy lifestyle interventions can help reduce this health inequity. In this qualitative study, we examined the perceptions that decision makers in supportive housing agencies had toward a peer-led healthy lifestyle intervention and their views of contextual factors that could shape implementation at these agencies. A purposive sample of 12 decision makers from three supportive housing agencies was recruited. We presented participants a vignette describing our peer-led intervention and used semistructured qualitative interviews to examine their views. Interviews were recorded, professionally transcribed, and analyzed using directed content analysis. Participants reported positive views toward the intervention with the most valued intervention attributes being relative advantage over existing services, compatibility to clients' needs, ability to pilot the intervention, and cost. A model emerged from our data depicting multilevel contextual factors believed to shape the implementation of our intervention at these agencies, including system- (funding, marketability, and external regulations), organization- (leadership support, fit with organization, staff buy-in and burden), and client-level (adaptability to clients' needs, and clients' buy-in) factors. Study findings illustrate the importance of understanding the context of practice before implementation. This examination can help identify critical views from decision makers that could undermine or advance the integration of peer-led interventions in supportive housing agencies and help identify structures, policies, and organizational practices that can inform the implementation process.

Keywords

Implementation context, Healthy lifestyle interventions, Serious mental illness, Supportive housing, Obesity

INTRODUCTION

People with serious mental illness (SMI; e.g., schizophrenia) have shortened life expectancies compared with the general population largely due to cardiovascular disease (CVD) [1, 2]. Risk factors associated with CVD, including physical inactivity and poor dietary habits, are more prevalent in people with SMI than in the general population [3, 4]. Healthy lifestyle interventions that reduce the risk factors for

Implications

Practice: Understanding the context of practice before implementation can help identify factors to facilitate the deployment of peer-led healthy lifestyle interventions for people with serious mental illness (SMI) in supportive housing.

Policy: The implementation of peer-led healthy lifestyle interventions for people with SMI in supportive housing must consider the interplay of funding, external regulations, leadership support, fit with organization's mission, administrative burden, and buy-in from frontline staff and clients.

Research: Future work is needed to develop contextually grounded implementation strategies to facilitate the delivery of health interventions that can reduce health disparities among people with SMI.

CVD can improve the physical health of people with SMI [5, 6], yet these interventions are not widely available to people with SMI [7]. The delivery settings of these interventions has often been limited to clinics where implementation may be facilitated by factors such as availability of health professionals and infrastructures that support the reimbursement of health-related services. Deploying healthy lifestyle interventions more broadly to other community-based settings that serve people with SMI, such as supportive housing agencies, can increase the reach and potential health benefits of these interventions, but implementation in these settings may face unique challenges [7, 8].

Supportive housing agencies are an important service setting to reach people with SMI in the community because these agencies provide community-based housing alongside health, mental health, and social services [9]. People in supportive housing

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can also benefit from healthy lifestyle interventions because they tend to be older and have higher rates of chronic medical conditions (e.g., diabetes) than people in the general population [10]. Studies by our group have also found that supportive housing clients would welcome healthy lifestyle interventions delivered by peer specialists who have lived experiences recovering from mental illness and are trained to deliver services that promote wellness, recovery, and resilience [7, 11, 12].

An important step for deploying peer-led healthy lifestyle interventions in supportive housing agencies is to explore how decision makers (e.g., agency directors, program managers) at these organizations perceive these interventions and identify contextual factors at multiple levels (e.g., system, organization) that could influence their decisions to implement these interventions. The introduction of a new intervention into an organization is a complex process that is influenced in part by the characteristics of the new intervention and the people involved, particularly decision makers who need to make sense of the practice innovation, examine the risk and benefits of adopting it, and determine how to best introduce the innovation into their organization [13–15].

The implementation of a new intervention is also shaped by the local context of that organization [14]. Context in implementation science frameworks is commonly divided into outer and inner settings [13, 14]. The outer setting includes a variety of system-level factors outside of the organization, such as legislations, reimbursement policies, market pressures for practice innovations, funding priorities, competition and collaborations between organizations, among many others [16]. The inner setting is composed of a confluence of factors that reside within the organization and includes organizational structures, values and resources, organizational culture and climate, leadership styles, staff roles, expectations and training, administrative processes and burden, clients' need and preferences, among many others [14].

Despite the importance of these issues in preparing organizations for the implementation of a new practice innovation, little is known about how decision makers in supportive housing agencies perceive a peer-led healthy lifestyle intervention for people with SMI before it is introduced into their organizations. In this qualitative study, we address this important gap by examining directors' and program managers' views of our peer-led healthy lifestyle intervention and the contextual factors they identified as important determinants of the implementation process for this intervention in these specific supportive housing agencies. This qualitative inquiry is part of an ongoing Hybrid Trial Type 1 study in which we are testing the effectiveness and examining the implementation of a peer-led healthy lifestyle intervention in three supportive housing

agencies serving clients with SMI who are overweight or obese [8]. This type of design has a dual focus of testing the effectiveness of an intervention while at the same time gathering information about the intervention's potential for implementation in routine practice settings [17]. Examining decision makers' views of our peer-led healthy lifestyle intervention before its implementation in three supportive housing agencies even within a Hybrid Trial Type 1 study can advance the translation of research into practice in several ways. First, it provides an opportunity to understand the context of practice before implementation happens as decision makers learn about the intervention and begin to make decisions about its implementation. Second, it can help identify structures, policies, and organizational practices that could facilitate or impede the use of peer-led health interventions in these settings. Third, it can identify critical views from decision makers that could undermine or advance the integration of peer-led services within their organizations.

METHODS

Study settings

This study was conducted in three supportive housing agencies participating in a Hybrid Trial Type 1 study [8]. Two agencies follow a treatment-first model in which clients are offered housing with the condition that they receive mental health services. In contrast, one agency follows the housing-first model, a Substance Abuse and Mental Health Services Administration-recognized evidence-based practice in which clients are offered housing without requiring them to participate in treatment [18].

PGLB intervention

Peer-led group lifestyle balance (PGLB) is a manualized, group-based healthy lifestyle intervention adapted from the group lifestyle balance intervention derived from the Diabetes Prevention Program [7, 19]. PGLB focuses on nutrition and physical activity and uses established behavioral techniques (e.g., self-monitoring) to improve dietary habits and increase physical activity [8]. The intervention is a year-long program that consists of weekly core sessions for 3 months, bi-monthly transition sessions for 3 months, and monthly maintenance sessions for 6 months. Each session lasts ~60 min and is delivered to six to eight participants at their respective housing agency. Each participant receives a bathroom scale to monitor their weight throughout the intervention, PGLB handouts, and materials for each session and is asked to monitor their diet and physical activity using a food and activity tracker throughout the program. The intervention is delivered by certified peer specialists who are employed at the housing agencies and are trained and supervised by the study team [8].

Sample

The directors of the three supportive housing agencies served as key informants for their organizations and were interviewed first. We asked them to nominate up to three program managers who oversaw health programs (e.g., wellness groups) at their respective agencies. All program managers nominated participated in the study. This sampling approach was used to identify people within each organization who were involved in making decisions regarding the introduction and management of new health programs. In total, 12 individuals participated in the study, three directors and nine program managers.

Qualitative interviews

Semistructured qualitative interviews were conducted in person by the first or second author; both have doctoral degrees and bring more than 10 years of experience conducting qualitative health services research. All interviews were audiotaped, professionally transcribed, and lasted approximately 60 min. Interviews were conducted before PGLB was introduced to these supportive housing agencies. As part of the interview, we presented each participant a vignette describing PGLB (available upon request) to examine their views and reactions toward this intervention. A copy of the vignette was read and provided to the participant. The interview guide (available upon request) was informed by constructs derived from the Diffusion of Innovations Theory, particularly innovation attributes (e.g., relative advantage, cost, complexity) [20], and the Consolidated Framework for Implementation Research (CFIR) [14] to inquire about participants' views of PGLB and contextual factors known to influence the implementation process in their specific agencies.

The interview included open-ended questions, such as "What did you think about PGLB?" and "How does PGLB compare to existing services at your agency?" We also presented each participant with a list of 27 multilevel contextual factors known to influence the implementation of new interventions. Each factor was derived from the CFIR and included: outer-setting system-level factors (e.g., influence from accreditation agencies, political pressures), and inner-setting factors composed of organization-level factors (e.g., administrative support, leadership support), intervention characteristics (e.g., extent to which PGLB is evidence based, fit with agency's mission), staff-level factors (e.g., buy-in from frontline staff), and client-level factors (e.g., clients' buy-in). An *Other* category was included to enable participants to name other factors that were not included in our list. Once participants reviewed the entire list, they were asked to select the factors they considered to be the most important to facilitating the adoption of PGLB at their agency and to then rank order the three they

considered most important in order of importance. This same process was repeated for selecting factors they perceived to be the most important barriers to PGLB implementation. We then asked participants to explain their rank-ordered choices to generate a discussion of their views about the contextual factors they thought could influence PGLB implementation at their agencies.

To examine participants' views of how attributes of PGLB might influence implementation decisions, we presented them with a list of 10 statements printed in separate index cards that represented the following intervention characteristics derived from the Diffusion of Innovations Theory: relative advantage, cost, social influence, compatibility to organization, compatibility to clients, complexity, training, and trialability (statements available upon request) [20]. Similar to the process described earlier, we asked participants to read each statement, pick the three that they deemed most important in helping them decide to implement PGLB, and rank-order them from most to least important. We then asked them to explain their choices.

Participants completed a short survey at the end of the interview to collect data on socio-demographics and work experiences. Interviewers also completed interview summaries after each interview to describe general impressions about participants' responses and lessons learned from these interviews. These summaries were reviewed during team meetings to learn about the interviews, begin to identify common codes and emerging themes, and to determine whether we were achieving data saturation. After 12 interviews, the team concluded that data saturation was achieved as no new information emerged from the interviews.

Data analysis

All quantitative data were entered into SPSS version 24. Frequencies, means, and standard deviations were used to describe sample characteristics and participant rankings of contextual factors and intervention characteristics. Directed content analysis was used to analyze qualitative data [21]. This is a deductive analytical approach that derives codes from existing theories and constructs and is commonly used to validate, expand, or refute existing theories [22]. To develop our initial codes, we started with key concepts derived from the Diffusion of Innovations Theory and the CFIR in terms of intervention characteristics and contextual factors at the outer and inner settings. A team of investigators including the two authors independently read each transcript and interview summaries, noting segments of text that corresponded to our initial codes as well as new emerging codes and drafted analytical memos to describe the generation of their coding schemes. We then met on a weekly basis for several months to present and discuss the identification and application of codes, development of emerging codes,

identification of themes, and general interpretations of the data. These discussions and our meeting notes were used to develop a final code book. Examples of codes included concerns about PGLB, intervention attributes, and implementation factors.

Atlas.ti was used to conduct line-by-line coding of all qualitative data. Two research assistants involved in the generation of codes coded all of the qualitative data under the supervision of the project director. We generated reports in Atlas.ti to examine coded text that focused on participants' views of PGLB, discussions of contextual factors that could influence PGLB implementation, and discussions about participants' views of intervention attributes. We wrote analytical memos to summarize key findings and emerging themes from these coding reports. To facilitate the comparison of themes and key findings across the three organizations that participated in this study, we developed a thematic matrix noting common and unique patterns across organizations for each of the outer and inner setting contextual factors and intervention attributes identified in our analysis [23]. Through these side-by-side comparisons, we found no discernible differences in the contextual factors that were identified by participants. We then used these findings to develop a common model to illustrate the contextual factors at the outer and inner settings that were identified as key determinants of the implementation of PGLB in these supportive housing agencies. We used established strategies (e.g., audit trail, peer debriefing meetings) to ensure the trustworthiness and rigor of our analysis [24].

RESULTS

Sample characteristics

The study sample was composed of 12 decision makers. Sample characteristics are presented in Table 1. Most participants were female, non-Hispanic Whites,

social workers, or medical professionals (e.g., nurses, physicians). On average, participants had worked at their respective agencies for 5 years and had more than 10 years of experience working with people with SMI and in supportive housing.

Views of PGLB

All participants reported positive views toward PGLB describing it “as a much needed” intervention and a “good idea” that could help address many of their clients' health needs. The aspects of PGLB most valued by participants included being peer-led, focused on wellness, particularly around issues related to diet and physical activity, and the hope that this intervention could have “spillover” effects on their clients' life goals and aspirations by improving their self-efficacy and confidence. Others talked about how bringing PGLB could help strengthen efforts to integrate more health and wellness services into their organizations, as described by this agency director:

I think that it will be interesting to see how this [referring to PGLB] changes some of our culture here on other things that we can be doing organizationally toward health, including our staff. I think it may have a domino effect in that respect... I think it can have a cultural shift toward more health.

Participants also mentioned several concerns regarding PGLB, mostly around how to best introduce and integrate this new intervention into their operations. These included logistic and staffing issues, such as having space to host the intervention groups, worries about burdening staff with new responsibilities, and how to best prepare nonpeer staff to work with peer specialists given nonpeer's lack of experience and potential apprehension

Table 1 | Sample characteristics (N = 12)

Sample characteristics	Mean (SD)	n	%
Age	46.9 (12.3)		
Female		9	75
Ethnicity/race			
Non-Hispanic White		10	83.3
African American		1	8.3
Hispanic		1	8.3
Profession ^a			
Social worker		4	33.3
Medical professionals (e.g., nurse, physician)		4	33.3
Administrator		6	50
Other		1	8.3
Average years working at organization	5.2 (4.8)		
Average years working with people with SMI	16.4 (9.6)		
Average years working in supportive housing	14.6 (10.7)		

SMI serious mental illness.

^aSome participants identified multiple professions; thus, percentages do not add up to 100.

working with this new workforce. Another key concern focused on how to avoid intervention drift and sustain the fidelity and enthusiasm for this manualized intervention over time, as captured by the comment from this agency director:

I think it's always the danger with manualized things—is that I think some of the stuff becomes rote. And I think the further you get away from the initial implementation, I think things start to get a little stale.

Participants also worried about how to keep clients engaged over the course of the intervention, particularly how to sustain clients' attendance, interest, motivation, and health behavior changes.

The rankings of intervention attributes most valued by directors and program managers in supporting the use of PGLB at their organizations are presented in Table 2. Relative advantage described as PGLB being better than existing services and having evidence that supports its effectiveness, particularly for their clients, was the most important attribute for both directors and program managers. This attribute was seen as essential for securing

support, resources, and funding for this type of intervention, as stated by this program manager:

if we're showing evidence for it, like for this population, that it's actually helping with the treatment of chronic disease in the seriously mentally ill population, that's a great thing to tout and be able to say that this should get paid for in some way, shape, or form.

Compatibility with clients was the second most selected intervention attribute, particularly for program managers. This choice focused on the importance of the intervention meeting clients' needs and aligning with their preferences and values, thus building clients' buy-in and sustaining their motivation for the intervention. For directors, the second most important attribute was trialability in terms of having opportunities to pilot the intervention before embarking on a larger scale-up, as mentioned by this director: "I think piloting something before you make the deep plunge sometimes is helpful." Cost was another critical attribute that focused on views about how to pay and sustain the intervention over time, as described by this program manager:

Table 2 | Decision makers' ranking of peer-led group lifestyle balance intervention attributes

Intervention attributes	Agency directors (n = 3)		Program managers (n = 9)		Total (n = 12)	
	n	%	n	%	n	%
1st choice						
Relative advantage	2	67	3	33	5	42
Cost	0	0	2	22	2	17
Social influence	0	0	0	0	0	0
Compatibility to organization	0	0	0	0	0	0
Compatibility to clients	0	0	3	33	3	25
Complexity	0	0	1	11	1	08
Training	0	0	0	0	0	0
Trialability	1	33	0	0	1	08
2nd choice						
Relative advantage	1	33	2	22	3	25
Cost	1	33	2	22	3	25
Social influence	0	0	0	0	0	0
Compatibility to organization	0	0	0	0	0	0
Compatibility to clients	0	0	1	11	1	08
Complexity	0	0	2	22	2	17
Training	1	33	1	11	2	17
Trialability	0	0	1	11	1	08
Third choice						
Relative advantage	0	0	3	33	3	25
Cost	0	0	1	11	1	08
Social influence	0	0	0	0	0	0
Compatibility to organization	0	0	0	0	0	0
Compatibility to clients	0	0	1	11	1	08
Complexity	2	67	0	0	2	17
Training	0	0	1	11	1	08
Trialability	1	33	3	33	4	33

“reimbursable... people won’t consider a new program unless they think it is self-sustaining, that is really critical.”

Other attributes selected, mostly as second or third choices, included complexity and training. Complexity discussions focused on concerns regarding how organizations will cope with the intricacies of delivering PGLB, particularly around staffing demands, burden and capacity. Training was discussed in terms of having the appropriate supports to prepare staff, particularly the new peer specialists, to deliver the intervention through training workshops, manuals, and ongoing supervision.

Local model of implementation factors

A local model of key contextual factors believed to shape the implementation of PGLB in these three supportive housing agencies emerged from our data (see Fig. 1). The model depicts a series of outer setting factors at the system-level and a series of inner-setting factors at the organization and client levels. Illustrative quotes for each of these factors are presented in Table 3.

System-level contextual factors

Three system-level factors (funding, marketability, and external regulations and policies) were identified as being influential to PGLB implementation. First, directors and program managers talked about the importance of funding to support the implementation of PGLB. The ability to pay for PGLB either through a new funding stream or as a reimbursable service via Medicaid was discussed as an essential condition for adopting and ultimately sustaining this intervention at their organizations. However, funding also had its downsides. Several program managers talked about the unintended consequences of accepting funds from a new funding agency as it could create administrative challenges, such as new billing procedures and increased paperwork and oversight. Second, adopting programs that are supported and attractive to funders was seen as

an important priority for organizations in order to stay competitive in difficult and lean funding environments. This was also discussed by directors and program managers as an approach for increasing the marketability of their services to outside funders and donors, which are essential for the vitality and survival of non-for-profit organizations. Lastly, attention to external regulations and policies was identified as another system-level factor that, if not addressed, could stifle implementation. Program managers, in particular, talked about how regulations from accreditation and funding agencies could result in too much paper work, redundancy, and uniformity in the delivery of services creating unnecessary burdens for administrators and managers. It could also restrain the ability of organizations to adapt the intervention to their local needs.

Organization-level contextual factors

Four organization-level factors (leadership support, fit with organizations, staff buy-in, and administrative/staff burden) were discussed. First, support from organizations’ leaders (board of directors, chief executive officers) was identified as a necessary condition for implementing PGLB. Program managers, in particular, talked about how leadership support was essential because introducing PGLB in their organizations requires substantial investments in time, resources, and staffing changes. Leaders were seen as facilitators of implementation because they could help build buy-in from staff and make sure resources are available to support the adoption of new programs. Second, the compatibility or fit of PGLB with the organizations’ mission, philosophy of care, and/or staff skills and orientation was seen as important for implementation. Directors and program managers talked about how the introduction of an intervention like PGLB must fit with their organizations’ interest for improving clients’ physical health and for the integration of health and wellness services. Without this fit, PGLB would be seen as a disruption to the organizations’ operations and not be

Fig 1 | Local model of contextual factors for implementing the peer-led group lifestyle balance intervention in three supportive housing agencies.

Table 3 Illustrative quotes for peer-led group lifestyle balance (PGLB) implementation factors

Factors	Illustrative quotes
System level	
Funding	• “It makes it a hell of a lot easier to do medical intervention when we can bill Medicaid” (D). • “If its reimbursable it’s gonna be a go and on into the foreseeable future because if someone can get paid to do it we’re going to do it and find a way to get people to come to it” (PM). • “I have experienced really ridiculous amounts of reporting and oversight and demands from a funder... I mean I should not have even accepted this money because it’s driving me nuts. For the amount of money because now I’m like poking myself in the eye because it’s so oppressive. I’m just like so sick of it” (PM). • “That can be a barrier for folks... maybe their Medicaid lapses... and then suddenly now you’ve got like a disruption because they had Medicaid when they started, then it lapsed three weeks in and then you know... it becomes an administrative burden because then you are like... okay we can’t bill for that. So... they’ll just get that session for free. It creates a level of administrative worry... that I’m afraid could take away from what it’s originally intended to do. Or like it will take away from like the flexibility of the program, which I would hate to see a person be like, “Oh sorry, you can’t participate anymore because you got a job and now you don’t qualify for Medicaid, so you are too bad, bye, bye” (PM).
Staying competitive and marketable	• “Basically when we look at the public agencies in [name of city removed] the majority of our support right now is from the public agencies and the local HUD office. It’s important for us to have them look at what we’re doing in a positive light. I worry about them more than I worry about others because they have been most supportive” (D). • “Definitely the marketability to funders... staying competitive with other agencies” (PM).
External regulations and policies	• “These accreditation agencies really try to make things too uniform and then not really let you develop the intervention [referring to Peer GLB] in the way that makes sense for your organization” (PM). • “Funders as a potential barrier... Sometimes they’ll require things that seem redundant or extra not necessary to my mind. And it not necessarily helping to facilitate whatever it is that you’re trying to do” (PM). • “They have all these rules that could probably screw up a good program just with bureaucratic mumbo jumbo, that takes away from a person doing something.” (PM B)
Organization level	
Leadership support	• “Leadership wasn’t behind it, we wouldn’t really be able to; it wouldn’t come up off the ground anyway. It wouldn’t be sustained; or it would just get vetoed and wouldn’t be able to keep it going” (PM). • “Agency leadership support, because those are the folks who hear from our staff and the message can get to them about what’s working or doesn’t work. So they can support stuff continuing. They’re the ones who control... the budget, everything... I guess it’s a group effort, but they hear, they take in what everyone has to say and kind of make those calls” (PM).
Fit with organization	• “I think it’s important to just when we do start new things to have it be a good match and not be something way out in left field that we’re asking the staff to do” (PM). • “Match GLB with philosophy and mission of our agency is definitely a facilitator. Our agency is very much for promoting physical health and integrated care” (PM).
Staff buy-in	• “If you don’t have your most respected and creative staff on board... then it’s not going to roll out” (D). • “If I couldn’t get buy in from staff to make this happen, that they may pretty haphazardly do it and it wouldn’t be effective then” (PM).
Administrative and staff burden	• “Levels of workload and time resources need. I think that’s critical to the success of it is that the people in charge of getting it implemented, administratively as well as like direct service... It will be really important that there’s enough time that’s carved out for folks to really be able to make sure it gets implemented well. I think that’s like anything we do, but especially you know just everything takes time, so you want to make sure you don’t short change the time piece” (PM). • “Staff can only take so much more both in terms of workload and time and administrative burden” (PM).
Client level	
Adaptability to clients’ needs	• “Extent to which the [PGLB] can be adapted to meet your local needs. If that can be adapted I think that is a facilitator...” (PM) • “Adapting, so basically the [PGLB] being able to meet the need of where our folks are, I think it’ll be good, cause the main thing that we want to do is that we’re always putting our residents first and what they need” (PM).
Meet clients’ needs and interests	• “I mean it’s about the client... the interventions that we offer need to be something the clients are interested in and will find helpful because that’s why they are here” (PM). • “If the intervention isn’t going to address the needs adequately then that is a deal breaker. If the clients aren’t going to support it that is a deal breaker” (D). • “Most importantly has to meet the needs of the population. That is the number one priority for the program” (PM).
Clients’ buy-in	• “If they’re not interested [referring to clients], they’re not going to come; they’re not going to be a part of it” (PM). • “Usually not being able to sustain something has to do with the clients losing interest” (D). • “Level of support for GLB by clients at your agency. Yeah, that to me is a no-brainer. You have to have enough buy-in and hopefully that buy-in can be created through the talents of the peer, but also the participants” (PM).

D director; PM project manager; GLB group lifestyle balance.

supported by staff members. In a similar vein, staff buy-in was identified as a facilitator of implementation. Directors and program managers discussed how building staff buy-in and engagement, particularly from respected staff members and during the decision-making process when a new program is being introduced, was discussed as an important strategy to support implementation. The fourth factor discussed was administrative and staff-burden. Program managers in particular worried about the extra responsibilities both administratively and clinically that PGLB could create for staff and how these new responsibilities and burdens need to be addressed, through trainings, careful planning, and restructuring of tasks and roles to ensure implementation success.

Client-level contextual factors

Three client-level factors (adaptability to clients' needs, meeting clients' needs and interests, and clients' buy-in) were discussed. All three factors focused on the importance of PGLB fitting with clients' needs, preferences, and interests. This alignment was seen by directors and program managers as congruent with the programmatic priorities of each of their organizations in supporting and developing client-centered programs. Clients' buy-in, support, and interest in the intervention were seen as necessary conditions for the acceptance and sustainability of PGLB at each of their organizations. The absence of clients' support and inattention to meeting clients' needs were considered as "deal breakers" for the adoption and long-term viability of new programs.

DISCUSSION

We examined the context of practice before the implementation of PGLB in three supportive housing agencies participating in a Hybrid Trial Type 1 study. Our findings revealed that decision makers at these agencies had positive views toward this intervention because it addressed their clients' health needs. The most valued intervention attributes identified were relative advantage over existing services, compatibility with clients' needs and preferences, ability to pilot the intervention in a small scale, and cost. Participants' concerns about the introduction of PGLB into their agencies focused on addressing logistic matters (e.g., space for group sessions), staffing issues (e.g., training), sustaining intervention fidelity over time, and maintaining clients' engagement. A local model emerged from our analyses depicting multilevel contextual factors that decision makers identified as influencing their decisions to implement PGLB at their agencies.

The Diffusion of Innovations Theory stipulates that decision makers in the early stages of introducing an innovation within an organization need to make sense of the innovation by examining the

innovations' attributes (e.g., cost, relative advantage, complexity) [20]. The examination of these attributes helps reduce decision makers' uncertainty about the innovation and clarifies whether the innovation fits with their organization. Decision makers in our study focus on the benefits, fit, and cost of PGLB suggesting that they would benefit from information about PGLB's relative advantage, fit, and costs. This information could be disseminated through multiple approaches such as short reports or briefings to agencies' leaders about PGLB' benefits and video testimonials of agencies that have successfully implemented PGLB.

Decision makers also identified the importance of providing their agencies with the opportunity to pilot test PGLB with a small number of clients and peer specialists. Piloting PGLB is critical for agencies that lack the experience, resources, and infrastructure to deliver health interventions [25]. This could be done with the provision of startup funds to help agencies build the infrastructure for a larger scale-up of PGLB. Our findings also indicated that supportive housing agencies may benefit from financial plans that address cost concerns, including ways of securing funding from external contracts and strategies for making these services reimbursable.

Our model depicted how implementation decisions were shaped by the interplay of funding concerns, external pressures and regulations, leadership support, fit with organization's mission, concerns about administrative burdens, and the importance of staff and clients' buy-in. At the outer setting, participants selected a series of system-level factors that revolved around funding, managing external regulations and policies, and the marketability of their organizations and services. The focus of these system-level factors can be understood through the lens of organizations' capacity to manage the risk and benefits of implementing a new program [15]. This capacity perspective indicates that decisions to implement are shaped by concerns of not only how to pay for the new services, but also how the organization will be able to administer the new program. Our findings indicated that decision makers in these supportive housing agencies must consider their organization's administrative capacity to manage the new contingencies (e.g., reporting regulations) that come with the introduction of PGLB. Efforts to implement PGLB should carefully consider organizations' administrative capacity and, when necessary, provide management supports to address financial, regulations, and administrative issues. Given that funding for supportive housing is often a complicated patchwork of private and public funds from local, state, and federal sources, agencies need to develop strategies that effectively reconcile funder obligations, client needs, and ongoing fiscal viability.

At the inner setting, our model captured how decision makers focused on a series of organization- and

client-level factors, including leadership support, compatibility, and buy-in. Leadership support is critical for introducing new innovations into organizations because leaders exert influence in the implementation process, such as securing resources and developing the necessary infrastructure [14]. Leadership support for PGLB is critical as this intervention requires multiple changes, including staffing roles and training, logistical issues in recruiting and running groups, and providing peer-led services. Leadership support and buy-in at all levels for healthy lifestyle interventions may be especially necessary for supportive housing agencies because they often need to shift their organizational culture to prioritize clients' physical health needs and to deliver consistent messages regarding health promotion.

Compatibility captures the degree to which the new intervention fits with the mission, values, needs, and infrastructure of the organization [20]. Decision makers in our study identified issues of fit, particularly around mission, administrative and staff burden, and clients' needs, as important considerations for implementing PGLB. Implementing practice innovations into an organization requires careful attention to issues of compatibility at multiple levels (client, staff, and management) because practice innovations in their original form never fit perfectly into the organizations that they are being introduced [20]. Our findings mirror calls for considering multiple sources of intervention adaptation (e.g., service setting, target audience, mode of delivery) in order to improve the compatibility between the new intervention and the context of practice [26]. Implementation strategies that combine planning, training of providers, and the restructuring of administrative and services roles can help address issues of compatibility [27].

Lastly, decision makers identified staff and clients' buy-in as essential for implementing PGLB. The implementation of a new practice innovation is a collaborative process that requires the interactions, collaboration, and negotiation of stakeholders involved and affected by this innovation [13]. Our findings highlight the importance of making sure that PGLB is palatable to staff and clients alike by addressing their preferences, needs, and concerns. Efforts to engage staff and clients in the implementation process via collaborative approaches (e.g., advisory boards) from the very beginning seem prudent as they bring a wealth of local knowledge that can provide the necessary support for this complex process.

Several study limitations need to be considered. First, we examined the views of decision makers toward a specific healthy lifestyle intervention in three supportive housing agencies. This limits the generalizability of our findings as their views may not be representative of other stakeholders in these and other organizations and for other interventions.

Although the contextual factors included in our model may be present in the introduction of other interventions into these and other settings, our findings are constrained to our specific sample, setting, and intervention. Future work is needed to explore similar questions with different stakeholders in other settings and interventions to clarify whether our local contextual model of implementation factor for PGLB could be applied more broadly. Our cross-sectional design prevented us from examining how views of PGLB change over time, particularly once they had a chance to deliver this intervention at their agencies. We are currently examining these views in a subsequent study. The three agencies included in this study could be considered early adopters given their willingness to participate in a Hybrid Trial Type 1 study. Their views of PGLB implementation may be different from other organizations.

CONCLUSIONS

Our study illustrates the importance of understanding the context of practice before implementation. This examination helped identify decision makers' views that could undermine or advance the introduction of PGLB into three supportive housing agencies and identify structures, policies, and organizational practices that can inform the implementation process. The deployment of innovative health interventions into community organizations serving people with SMI is a critical step for addressing the deadly health disparities affecting this population. Future efforts to introduce healthy lifestyle interventions into community agencies like supportive housing agencies could benefit from implementation strategies that help decision makers identify and address the contextual factors that shape the implementation of practice innovations in their organizations.

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Compliance with Ethical Standards

Conflict of Interest: The authors report no conflict of interest.

Primary Data: The findings reported here have not been previously published, nor is the manuscript being simultaneously submitted elsewhere. The authors have full control of all primary data and will agree to allow the journal to review de-identified data if requested.

Ethical Approval: All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. This study was approved by the Columbia University Institutional Review Board. No animals were involved in this study.

Informed Consent: Informed consent was obtained from all individual participants included in the study.

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