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ORIGINAL ARTICLE

Practices to support co-design processes: A case-study of co-designing a program for children with parents with a mental health problem in the Austrian region of Tyrol

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ABSTRACT: *Forms of collaborative knowledge production, such as community-academic partnerships (CAP), have been increasingly used in health care. However, instructions on how to deliver such processes are lacking. We aim to identify practice ingredients for one element within a CAP, a 6-month co-design process, during which 26 community- and 13 research-partners collaboratively designed an intervention programme for children whose parent have a mental illness. Using 22 published facilitating and hindering factors for CAP as the analytical framework, eight community-partners reflected on the activities which took place during the co-design process. From a qualitative content analysis of the data, we distilled essential practices for each CAP factor. Ten community- and eight research-partners revised the results and co-authored this article. We identified 36 practices across the 22 CAP facilitating or hindering factors. Most practices address more than one factor. Many practices relate to workshop design, facilitation methods, and relationship building. Most practices were identified for facilitating 'trust among partners', 'shared visions, goals and/or missions', 'effective/frequent communication', and 'well-structured meetings'. Fewer practices were observed for 'effective conflict resolution', 'positive community impact' and for avoiding 'excessive funding pressure/control struggles' and 'high burden of activities'. Co-designing a programme for mental healthcare is a challenging process that requires skills in process management and communication. We provide practice steps for delivering co-design activities. However, practitioners may have to adapt them to different cultural contexts. Further research is needed to analyse whether co-writing with community-partners results in a better research output and benefits for participants.*

KEY WORDS: *children of parents with a mental health problem, co-design, community-academic partnership, mental health services, parental mental health.*

BACKGROUND

Addressing parental mental illness in the 'Village project'

International studies estimate that one in four children worldwide grows up with a parent with a mental health problem, and up to 45% of adult mental health care patients are parents (Abel *et al*. 2019; Maybery *et al*. 2009; Maybery & Reupert 2018). Those children are at increased risk of developing (mental) health problems themselves or experiencing other adverse impacts (e.g., lower educational attainment) (Goodyear *et al*. 2018; Pretis & Dimova 2008). Several evidence reviews demonstrated positive outcomes of preventive interventions, such as reduced risk of developing a mental illness (Lannes *et al*. 2021; Siegenthaler *et al*. 2012; Thanhäuser *et al*. 2017). However, the children are often 'invisible' from the existing service system. Furthermore, families face difficulties in accessing support and in many cases, needs-based care is lacking (Zechmeister-Koss *et al*. 2020). Based on this evidence and linked to the results from a public crowdsourcing process, an Austrian research funder has awarded funding to the project 'Village'. The project aims to improve the situation for children whose parents have a mental illness and their families in the Austrian region of Tyrol (www.village.lbg.ac.at). The name 'Village project' stems from the African proverb 'It takes a Village to raise a child' and reflects the project's goal to mobilize a network of formal and informal support around the children. It runs over 4.5 years covering the following phases: Firstly, a scoping phase including reviews on international evidence and a situational analysis in Tyrol (e.g., Bauer *et al*. 2021; Zechmeister-Koss *et al*. 2019; Zechmeister-Koss *et al*. 2020); secondly, a co-design phase with local stakeholders to develop a practice approach to identify and support children, and thirdly, an implementation phase where the designed practices are piloted. The entire process is being evaluated based on a realist approach using mixed-methods (Christiansen *et al*. 2019). We obtained ethical approval from the ethics committee of the Medical University Innsbruck (No. 1197/2019) for the overall project. Participation of and data collection from stakeholders was additionally approved by the Monash University Human Research Ethics Committee. None of the authors has a conflict of interest to disclose. The project applies collaborative forms of knowledge production throughout the entire research process (see Fig. 1).

Collaborative knowledge production

Collaborative knowledge production involves researchers and societal actors such as policymakers, practitioners, or users in the research process (Hinchcliff *et al*. 2014). It combines traditionally separated worlds, for example, the 'ivory tower' researchers and the practitioners (Greenhalgh *et al*. 2016). It tries to overcome the limitations of the conventional deterministic approach of evidence-based healthcare, where

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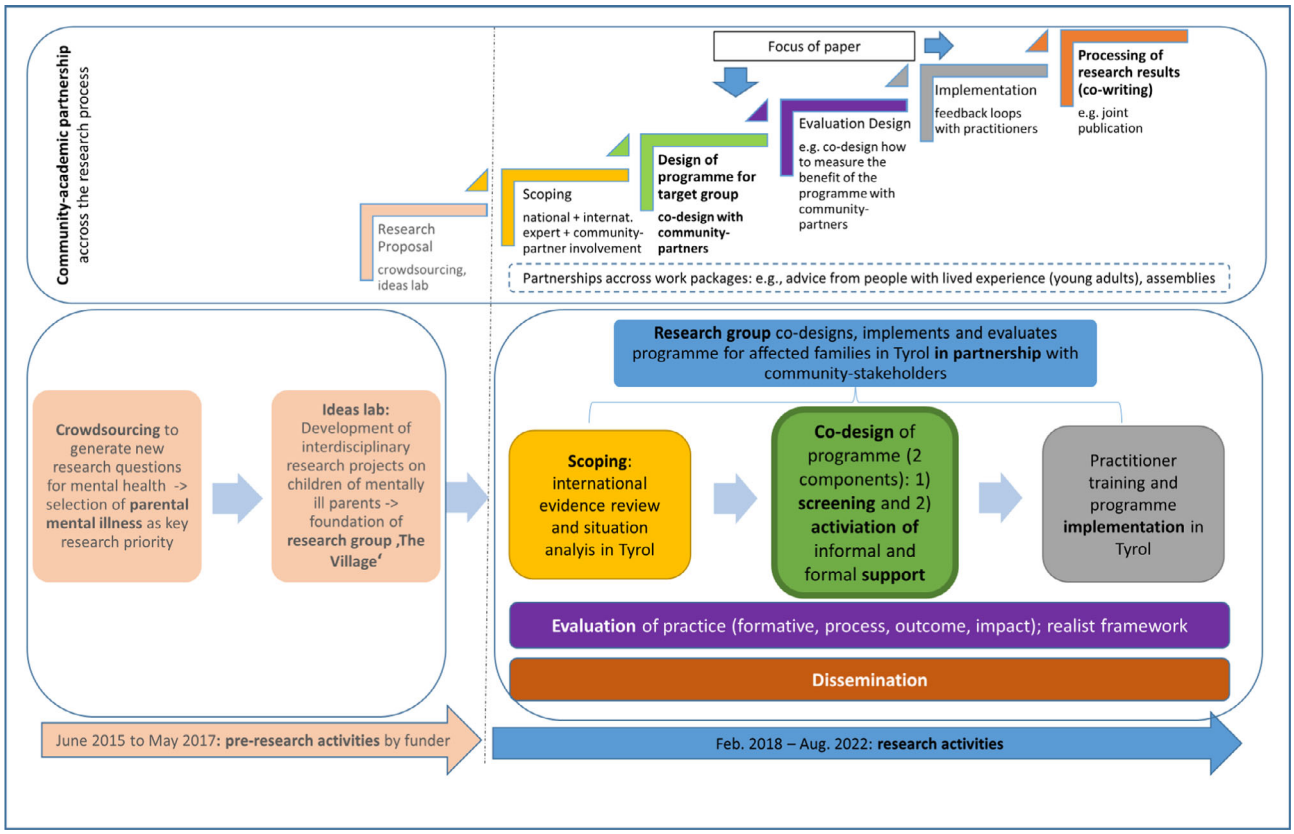

FIG. 1 Community-academic partnership architecture of the 'Village project'.

researchers would summarize 'research knowledge … and then package and process [it] in a way that makes it accessible to non-academics' (Greenhalgh *et al*. 2016, p. 395). In the mental health context, they respond to several challenges of bringing evidence into practice: Interventions to support children and their families usually require organizational changes and changes in practitioners' behaviour (Allchin *et al*. 2020; Goodyear *et al*. 2015). It commonly involves a paradigm shift, which may conflict with traditional models, practice concepts, and goals. An example is the introduction of recovery-oriented service models (Park *et al*. 2014). Importantly, using research and adopting knowledge in practice depends on social processes (e.g., reinforcement by professional networks) that can support change (Rycroft-Malone *et al*. 2011). Moreover, the interventions are often complex (Ghate 2018), likely failing if replicated in different contexts without modification (Ghate 2018; Goodyear-Smith *et al*. 2015). Findings from research may fit in one context but may be inappropriate in another setting.

We have identified various terms and concepts describing collaborative knowledge production. Examples are community-academic partnership (Drahota *et al*. 2016), open innovation in science (Beck *et al*. 2020; Loukis *et al*. 2016) or co-design (Agency for Clinical Innovation 2019; Goodyear-Smith *et al*. 2015; Sanders & Stappers 2008). They all have in common the shift from the hegemonic and hierarchical process of scientific discovery and translation to practice to a process of collaborative knowledge generation, whereby knowledge is produced within its context of application (Greenhalgh *et al*. 2016). An expectation is that the relevance, feasibility, and utility of research questions and design are improved, fostering service adoption, implementation, and sustainability (Drahota *et al*. 2016, p. 196).

Collaborative knowledge production in the 'Village' project

Throughout our project, we implement different forms of collaborative knowledge production. As demonstrated in Figure 1, the overall project architecture follows the principle of a community-academic partnership (CAP). By CAP, we mean a collaboration between at least one academic and one community organization or

stakeholder (Drahota *et al*. 2016). One core collaborative element within the CAP architecture that this article will focus on is designing a programme to identify and support children with a parent with a mental health problem. We refer to it as *co-design* in the remainder of the article. Following the Kleinsmann and Valkenburg (2008, p. 370) definition, we understand this as a

> process in which actors from different disciplines share their knowledge about both the development process and the development content. They do that … to create a shared understanding on both aspects, to be able to integrate and explore their knowledge, and to achieve the larger common objective: the new product to be developed.

By 'actors from different disciplines', we refer to researchers and stakeholders from other sectors, as Greenhalgh *et al*. (2016) outlined, including people with lived experience. Stakeholders from different sectors in our co-design process will be referred to as 'community-partners' in the remainder of the article. We will label persons who were part of the research team 'research-partners', all of which form the 'participants'.

The co-design process and its results are described elsewhere (Goodyear *et al*. 2022). In summary, six co-design workshops took place over 6 months using the knowledge from the scoping phase (Fig. 1). The overall aim of the co-design workshops was to develop an evidence-informed programme suited to the context, acceptable to local stakeholders, feasible, and ready for implementation. Community-partners for this process were selected based on a multi-criteria matrix aiming to maximize perspectives (e.g., having representatives from different professional groups or different public sectors). A total of 26 community-members representing 14 different local organizations participated, including two representing people with lived experience. In addition, a total of 13 research-partners attended the six workshops. At the end of the workshop series, participants agreed on a pathway for identifying and supporting the children and their families in the Tyrolean context and actions for the practitioners involved.

Aim of article

Several articles on collaborative processes in healthcare have been published (e.g., Bee *et al*. 2016; Boyd *et al*. 2012; Greenhalgh *et al*. 2016; Sheard *et al*. 2019). Reviews have identified facilitating and hindering factors of CAP-processes (Drahota *et al*. 2016) and favourable outcomes (Halvorsrud *et al*. 2021). However, researchers observed gaps in the comprehensive reporting of such processes (Drahota *et al*. 2016). Furthermore, we know little about the detailed steps for delivering co-design in practice.

In this article, we aim to address the question: 'What are the steps and practice ingredients to implement a co-design process that addresses known facilitating and hindering factors?' using our case study in mental healthcare planning. A practice, in our understanding, is an intentional, planned, and purposeful action rather than a thought or idea and may involve specific professional skills and training as well as automated (in the sense of routinized) procedures.

Following the principle of CAP, community-partners co-designing the Tyrolean identification and support programme with the researchers have been involved in producing this article as co-writers and thus in disseminating research results (Fig. 2). Thereby, we also aim to collect co-writing experience, particularly with non-academic experts. We are interested in learning to what extent such a co-writing process may result in generalizable practice instructions for others interested in delivering co-design processes. The article should be considered exploratory. An outcome evaluation of the co-design process is beyond the scope of this article and will be addressed separately.

METHODS

Design

The article was designed to systematically distil key co-design practice ingredients (actions based on specific skills) from our co-design case. As a first step, we undertook a structured reflection upon activities that were applied in our co-design process after finishing the co-design workshop series. As a framework for the reflection, we used the 22 facilitating and hindering factors that affect processes during a CAP, defined by Drahota *et al*. (2016) based on a systematic review (see Table 1). This framework differentiates between interpersonal factors (the quality of the relationship or communication among partners) and operational factors (the logistics and quality of partnership functioning). We selected this framework as it is, to our knowledge, the only one which rests on a systematic review of the CAP literature. Our reflection activity aimed to identify practices used in our co-design process targeting each of the 22 factors.

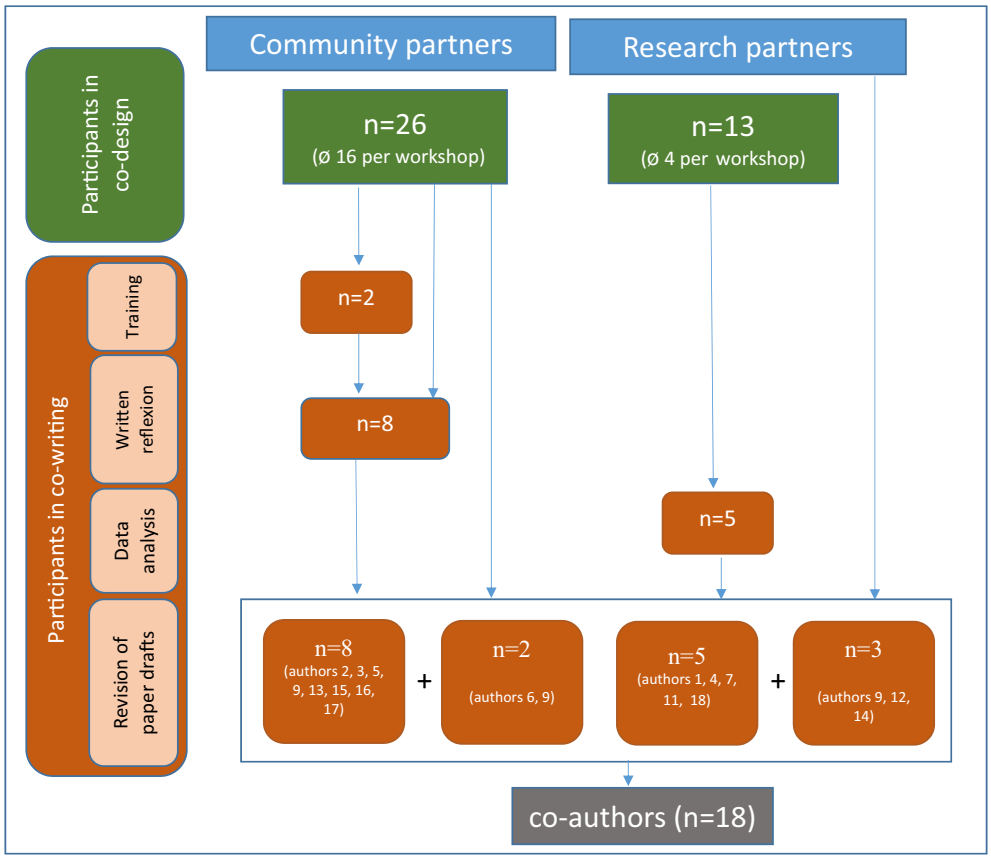

FIG. 2 Participants in co-design and co-writing.

Data collection

Each community-partner who expressed interest in participation (n = 11 out of 26) was allocated half of the 22 factors, alongside a definition of each factor and specific questions. For example, for the factor 'trust between partners', the question was: 'What were the ingredients we applied in the co-design workshops to build trust among partners?'. In the instructions, we stressed that the exercise aimed to identify applied practices during the process without value judgements. Eight community partners (including one person with lived experience, being a child of a parent with a mental illness) participated in this exercise. Community-partners documented the results from the reflection exercise individually, using a pre-defined template, and returned them to the research-partners via email.

Data analysis

The research-partners qualitatively analysed community-partners' results in an inductive content analysis (Elo & Kyngäs 2008) using NVIVO Version 12 Pro (QSR International Pty Ltd 2018). Across the community-partner-generated inputs for each of the 22 factors, the first author derived core practices by developing inductively determined codes from the responses. To identify practices, we selected those codes that fulfilled our definition of a practice, thus describing an activity rather than a thought or an idea. For example, if community-partners saw 'establishing a non-hierarchical atmosphere' as a facilitator for achieving 'respect' without describing activities on how this was done, we excluded it from our final set of practice-codes. Since we aimed to identify the variety of practices rather than the frequency of their application, we assigned each recognized practice the same weight regardless of the mentioned rate. We divided the list into practices that fall into the workshop preparation phase, those that fall into the workshop delivery phase, and practices that fall into the between-workshop or post-workshop period. Within those categories, we grouped the practices into further sub-categories (e.g., workshop design, facilitation techniques). We prepared

TABLE 1 *Facilitating and hindering factors for community-academic partnerships*

Facilitating factors	Hindering factors
Interpersonal factors[†]	
Trust between partners	Mistrust among partners
Respect among partners	Differing expectations of partners
Shared vision, goals, and/or mission	Lack of a shared vision, goals, and/or mission
Good relationships among partners	Bad relationships
Effective and/or frequent communication	Poor communication among partners
Clearly differentiated roles/functions of partners	Unclear roles and/or functions of partners
Effective conflict resolution	Lack of common language or shared terms among partners
	Inconsistent partner participation or membership
Operational factors[‡]	
Well-structured meetings	Excessive time commitment
Good quality of leadership	Excessive funding pressures or control struggles
Mutual benefit of all partners	High burden of activities/tasks
Good selection of partners	
Positive community impact	

[†]Constructs pertaining to the quality of the relationship or communication among partners.

[‡]Constructs pertaining to the logistics and quality of partnership functioning.

Source: (Drahota *et al*. 2016).

a matrix showing all (grouped) identified practices on the vertical axes and the facilitating and hindering factors that may be supported or avoided by the practices on the horizontal axis (Table 2). In a final step, we added activities from the co-design process to each practice to give examples of the detailed delivery of the practices (Table S1). We narratively present the practices and how they address each factor, alongside quotes from the primary data and example activities from Table S1. Presentation of results is based on the 'consolidated criteria for reporting qualitative research' (COREQ) (Tong *et al*. 2007).

The research-partners involved in the analysis (n = 8) had an interdisciplinary background (health and social sciences, linguistics, health economics, implementation science, translational sciences) and were part of the 'Village project'. All of them were female. Five fully or partly participated in the co-design process. The first author of this article led the co-design process. She has advanced knowledge of the Austrian mental health care system but had no previous working experience with the community-partners involved in the co-design process. The first author drafted the analyses and reflected the results with the research-partner co-authors. Furthermore, ten community-partners (five females) revised the draft. They had professional backgrounds in adult and child and adolescent psychiatry and family medicine, mental health nursing, social work in child and youth welfare and schools, psychology, and social pedagogics. One represented persons with lived experience. Figure 2 gives an overview of community- and research-partners' involvement in co-design and co-writing activities.

Preparations for co-writing

We supported co-authors who were not based in an academic setting and, therefore, less experienced in scientific writing with a video on the basics of scientific writing (https://bit.ly/3iC7S8M). Additionally, the lead author provided a 1-hour seminar on scientific writing to two community-partner co-authors. We provided detailed instructions on the co-writing tasks for the article in written, and, if requested, in oral form. Due to the Covid-19 pandemic restrictions, we collected all information in written form in German and translated it for the English speaking research-partners. We translated the English article draft back into German to enable equal participation in reviewing it. Community-partners received monetary compensation for their time.

RESULTS

Overview

The community-partners identified activities addressing all supportive and hindering factors in Table 1 (Drahota *et al*. 2016). The inductive analysis of their inputs resulted in 36 practice ingredients overall.

Table 2 provides an overview of all practices identified. In general, more practices addressed facilitating factors compared with the number of practices contributing to hindering factors. Secondly, while we identified practices concerning interpersonal and operational factors, those managing the former were more commonly recognized than those supporting the latter.

Most practices were seen to address several factors simultaneously, while a few addressed only one or a small number of factors. Examples of the former were 'holding the workshop with a professional facilitator',

TABLE 2 *Matrix of practices and facilitating/hindering factors*

	FACILITATING FACTORS (Drahota et al., 2016)											HINDERING FACTORS (Drahota et al., 2016)										
	Interpersonal							Operational				Interpersonal								Operational		
PRACTICES	Trust	Respect	Shared vision/goals	Good relationships	Effective / frequent communication	Clear roles / functions	Conflict resolution	Well-structured meetings	Mutual benefits	Selection of partners	Positive community impact	Unclear roles / functions	Poor communication	Mistrust	Lack of shared vision	Lack of common language	Bad relationships	Differering expectations	Inconsistent participation	Excessive time commitment	Funding pressure / control	High burden of activities
Before the workshops																						
Workshop set-up																						
Invest in preparation	x		x		x	x														x		
Carefully define number, duration and time period between workshops								x												x		
Set dates in advance, select them collectively														x					x		x	
Define replacement mode								x											x			
Select room with comfortable atmosphere	x							x									x					
Participant selection																						
Get to know potential candidates in advance	x		x							x	x								x			
Apply systematic candidate selection (incl. people with lived experience)	x		x			x				x												
Convey transparency on participant selection	x					x				x												
During the workshops																						
Design and facilitation																						
Hold workshop with professional facilitator			x		x	x	x	x	x			x	x			x	x	x		x		
Use appropriate facilitation techniques				x																		
Apply time management (assigning role)					x			x					x							x		
Use mixed formats				x	x			x														
Use group works (small groups)	x				x																	
Collect feedback using different methods	x																	x				x
Start each workkshop with summary + roadmap	x		x		x			x										x		x		
Provide clear instructions for tasks using different communication channels								x						x						x		
Documentation																						
Document all workshop inputs	x				x	x									x							
Use facilitation techniques to visualise process and results	x		x		x			x														
Linking research and practice																						
Connect design to community members' everyday life	x					x					x											
Use formats that enable community members' experience exchange			x		x	x											x					
Plan time slots for research team input			x												x	x						
Bring research team member into group works					x																	
Give community members active roles			x			x		x														
Relationship building																						
Know names of participants + address part. with names (name tags)	x	x						x	x													
Actively and warmly welcome participants		x																				
Plan time for getting to know each other + provide info on participants	x	x				x			x			x										
Define communication rules and remind regularly					x																	
- Do not use academic titles		x																				
- Use plain language, repeat technical terms, provide translation								x								x						
Use paraphrasing + active listening	x																					
Plan space for clarifications + discussions				x												x		x				
Address role uncertainty actively												x						x				
Serve drinks and food	x			x																		
Reserve time for informal networking	x			x	x			x	x													
In between / after the workshops																						
Provide handouts, follow-up after workshop (visualise) + invest in additional communication effort	x	x			x	x		x						x								
Be transparent on result processing			x																			

which was seen as addressing more than half of all 22 factors, or 'starting each workshop with a summary and a roadmap' which was seen as a practice addressing six different factors. Practice examples addressing only one factor were 'not using academic titles' or 'being transparent on result processing'.

Most practices were related to activities during the delivery of the co-design workshops; around a quarter

of all practices named fell into the planning period before the workshops, and two described activities in the period between or after the workshops.

Practices that address facilitating factors

Regarding the 11 facilitating factors, the largest number of different practices was identified for promoting 'trust among partners', facilitating 'shared visions, goals and/or missions', and 'effective and frequent communication' at the interpersonal level and for 'well-structured meetings' at the operational level. On the contrary, for facilitating 'effective conflict resolution' and 'positive community impact', participants identified only one practice, respectively. For the remaining factors, up to four different practices were named, respectively.

For four facilitating factors ('trust among partners', 'effective/frequent communication', 'clear roles/functions', and 'well-structured meetings'), we identified practices across all co-design phases (planning, delivery of the workshops, period in between or after the workshops). For one factor ('selection of partners'), practices only fell within the planning phase. For four factors ('respect among partners', 'good relationships', 'effective conflict resolution', and 'mutual benefits'), practices mainly fell into the phase of delivering the workshops.

Example activities for the planning phase (mainly addressing 'trust') were: supervision sessions for the research-partners between the workshops by an external supervisor or preparing a detailed design for each workshop outlining objectives, facilitation formats and techniques, and responsibilities for each task. Additionally, community-partners identified 'selecting a room with a comfortable atmosphere' ('living room atmosphere with freshly prepared food for the breaks') as supportive.

During the delivery of the workshops, trust-facilitating practices identified were, on the one hand, specific facilitation techniques (e.g., working in small groups, activating silent participants) and documentation practices (e.g., visualizing results using different media such as poster boards or power-point slides). On the other hand, we identified several 'relationship building' practices as trust-facilitators. One of those was for the researchers and the facilitator to know participants' names from the beginning and address participants by their name when asking for input or thanking them for a contribution. Name badges and getting familiar with participants' names before the workshops were seen as helpful.

Another relationship-building practice for facilitating 'trust' was to make participants feel welcome when entering the rooms, providing drinks and food ('connecting via pleasure') and folders with information, including seating arrangements. An additional practice was to define communication rules at the beginning and remind participants throughout the workshop: 'It was said repeatedly that everything is important.' They agreed that communication culture included: not using academic titles, speaking in plain language, repeating critical technical terms, and providing translations in case of foreign language inputs to enable all participants to follow the content and discussions regardless of their background and previous knowledge of the topic.

Furthermore, community-partners described paraphrasing and active listening methods during the workshop ('there were no corrections, just more precise enquiries') as relevant for fostering trust. In addition, they identified it as an essential practice to plan enough time for getting to know each other more generally, especially regarding each other's (professional) background, including the research team's qualifications. Activities include providing this information to all participants in written format (including headshots) or get-to-know exercises at the beginning of the workshop series. Finally, reserving time for informal networking ('breaks for individual networking were planned in') was another practice supporting trust.

Several of those practices also addressed the facilitators 'respect among partners' and 'good relationships', whereby the latter was also seen to be supported by the practice 'giving room for questions, clarifications ('question and answer sessions') and discussions.

Practices addressing the factor 'effective/frequent communication' mainly fell into workshop design and facilitation techniques, as expressed by the following quote: 'Participants in workshop 2 were able to prioritize subject areas relatively quickly by using coloured dots'. Other examples were to vary the composition of groups and work with different seating arrangements. Another group of practices, facilitating 'effective/frequent communication' but also 'trust' and 'shared visions', was related to documentation processes. An example was visualizing all contributions during the workshops (e.g., on flipcharts), even if they addressed issues beyond the subject, and simultaneously documenting results.

Practices identified for facilitating 'shared visions' and 'clear roles/functions' were primarily ones that tried to link research and practice within the workshops actively. Participants mentioned the importance of active inputs from the research team on evidence of what works internationally. The practice observed for supporting this was to plan time slots for these kinds of inputs ('regular professional inputs') and to make sure that 'a [research] team member participates in the respective working groups'. They also saw motivating community representatives to share their experiences from different professional backgrounds as supportive. Practices identified included designing activities connected to the community-partners' everyday life (e.g., an exercise where participants are asked about their current knowledge on the topic) or motivating community-partners to be rapporteurs in group sessions.

A practice to address 'conflict resolution' was the active mediation of conflicts: 'Intervention by the moderator by de-escalating and returning to the actual topic'.

Practices that address hindering factors

Regarding the 11 hindering factors, community-partners identified the largest number of different practices (five to seven) for avoiding 'a lack of common language or shared terms among partners' and 'differing expectations' at the interpersonal level and for preventing 'excessive time commitment' at the operational level. They named up to three different practices to avoid the remaining hindering factors.

Most practices that address hindering factors fall within the delivery phase of the co-design workshops. However, to avoid 'inconsistent participation' and 'excessive time commitment,' several practices (additionally) concerned the planning phase before the workshops. An example for the latter was to carefully define the numbers and duration of the workshops and the periods between the workshops. A quote by a community representative indicates the sensitive issue of time: 'More time for exchange would have been helpful – as always! But with longer workshop times, maybe not everyone would have participated?'

Another practice example to be applied before the workshops for avoiding inconsistency of participation was to set dates in advance and define them collectively by providing some options and using support tools ('Scheduling for the individual workshop was carried out in good time and "by mutual agreement"'). A third example was defining a replacement mode: 'If someone was unable to participate, they could delegate participation to a colleague who had been informed beforehand after consultation with the [research] team.'

During the workshops, practices described as avoiding hindering factors were primarily related to workshop-design and facilitation techniques. For example, sharing the agenda and time slots for each topic to 'avoid excessive time commitment'. Other practices during the workshops focused on orientation for participants. Examples included starting each workshop with a summary of the previous workshop and referring to a roadmap showing the group's progress (see Fig. S1). The format of those (well-structured, highly visualized) and transparency on whether or how workshop results have been processed were named other practices. In addition to 'collecting feedback using different methods', those practices were seen as primarily addressing the factor 'differing expectations of partners' and, in some cases, 'avoiding excessive time commitment'. Not least, providing unambiguous instructions for tasks that participants are asked to do during the workshops using different communication channels was identified as a practice that may avoid 'mistrust among partners' and 'excessive time commitment'. An example was to use both oral and written instructions and working with visuals and colour coding to support cognitive perception within limited time resources.

DISCUSSION

From the activities implemented and observed in our co-design case-study, we distilled 36 specific practices and related activities, which co-designers may apply to address pre-defined facilitating or hindering factors within a CAP. Eight of those practices fall within the co-design planning phase, 26 concern the delivery of the co-design workshops, and two relate to the period between or after the workshops.

Our findings confirm results from previous research, stressing that co-design is a process rather than an event whereby the process itself has been rated as necessary as its result (Greenhalgh *et al*. 2016). We demonstrated that practices are needed throughout the process to address all facilitating and hindering factors. The planning phase is easily neglected but seems particularly important, as some factors (e.g., avoiding inconsistent participation) were addressed only by practices within this phase. In line with other studies (Palinkas *et al*. 2015), this requires extra time for researchers.

Interestingly, more practices address interpersonal factors than operational ones, according to the categorization by Drahota *et al.* (2016). This is despite the operational factors (e.g., avoiding excessive time commitment) being more practice-related by nature than the interpersonal ones (e.g., achieving trust among partners). However, our study design did not allow specific testing of each factor in isolation. It will have to be further explored whether the differentiation into interpersonal and operational factors adds value to the question of appropriate co-design delivery.

Many practices concern communication and social interaction, highlighting the need for relationship building and relational capabilities, as outlined in other co-design guidelines (Agency for Clinical Innovation 2019). Although it may be less obvious for the researchers in the partnership, in addition to providing expertise and knowledge on the subject, our practices suggest that good communication and engagement skills are advantageous.

Other research on co-design has stressed the importance of process management (Crosby *et al.* 2017), which resonates with our results, demonstrating the relevance of professional facilitation, including its thorough preparation and the application of facilitation techniques. Frequently, researchers in the co-design literature stressed the selection of candidates and thinking carefully about it (Crosby *et al.* 2017; Greenhalgh *et al.* 2016; Kleinsmann & Valkenburg 2008). Our participant selection practices addressed six different facilitating/hindering factors, which seems to confirm the importance of careful candidate selection for the overall success of a CAP.

Some identified practices may appear self-evident in group processes and workshop facilitation. One example is to collectively set dates in advance and provide options for participation (Klebert *et al.* 1991). However, the fact that community-partners explicitly stressed the importance of the date-finding process may indicate that collaborative decision-making on processes may not necessarily have been standard practice for such partnerships. Furthermore, it indicates the value of community-partners' input in identifying practices that research-partners may not consider relevant.

Other practices may sound peculiar in an international context – for example, not using academic titles when speaking to a person. However, in Austria – especially when people meet for the first time – the cultural norm in communication is to use academic titles when addressing a person (Dunkel & Meierewert 2004). Therefore, some practices which may, on the one hand, be relevant for supporting co-design processes (e.g., for supporting mutual respect) may, on the other hand, challenge existing cultural codes and norms. This indicates the importance of considering the cultural context, professional relationships, and language characteristics within co-design processes and adapting practices accordingly.

Building trust and avoiding excessive time commitment were the factors with the highest number of practices. Interestingly, these were among the factors most frequently cited in the review by Drahota *et al.* (2016). They seem, therefore, to play a crucial role in successful CAPs.

While this article demonstrates that collaborating with community-partners throughout a research process, including disseminating research results, is feasible, we also need to acknowledge the challenges we faced regarding the co-writing part. Almost all community-partners were in full-time employment at their organizations, making it challenging to participate in a relatively time-consuming co-writing experiment in addition to the co-design process. Some are practitioners with no previous experience in scientific writing. Consequently, only a small subset of community-partners participated in the co-writing activities after the co-design phase. Due to restrictions on face-to-face meetings, we needed to collect input from community-partners in written form. Community-partners were also not involved in the NVIVO-content-analysis part. However, they commented on the results in draft versions of this article.

The number of participants and our form of data collection has likely limited the type and number of practices identified and the depths and richness of the analysis. While we identified practices for all predefined factors, the number of practices was very low for some factors (e.g., avoiding mistrust), suggesting that the identified practices are explorative rather than exhaustive. Research may distil further factors from other case studies, for example, 'adequately compensating people with lived experience' (Agency for Clinical Innovation 2019).

Other co-writing formats (e.g., a face-to-face co-writing workshop enabling an interactive process) may be tested in the future, providing more knowledge regarding the validity and quality of the co-writing outcomes. Finally, we have not yet evaluated whether the positive effects from co-writing described elsewhere (Hewlett *et al.* 2006; Kylberg *et al.* 2018) can be replicated in our case.

Further limitations of this article are: Firstly, some of the practices identified may need adaptation in

different contexts. Therefore, the results are not generalizable but can be an orientation for co-designers in other contexts in reflecting on and setting up their own processes. Furthermore, this is not an evaluation of our co-design process. An actual test of an effective co-design process is determined by the implementation of co-designed programmes and processes in the applied setting. In the meantime, the co-designed programme has been implemented in Tyrol, and the data collected alongside implementation are currently being analysed.

CONCLUSION

Collaborative knowledge production involving researchers and societal actors has gained importance in (mental) health services research. Expectations are that those processes create opportunities to increase the uptake of research findings in practice. However, they require careful planning, considerable time and staff resources, and true interdisciplinary teamwork.

Regarding co-designing a specific programme to be implemented in the care-system, the practices we have identified for delivering such a process require particular skills and qualifications (e.g., communication and facilitation skills) that most likely go beyond the standard qualification requirements of researchers. Researchers in collaborative processes need to do substantial 'translational activities'. Moreover, they need to actively establish relationships with the community-partners and be explicitly part of the knowledge production as persons, instead of positioning themselves as 'observers' from the outside or 'external' experts. Researchers need to support community-partners to be curious about international evidence and address directly if things are unclear. Our example also demonstrates that involving community-partners in disseminating research results is feasible and produces deeper insights. Other formats of co-writing may be tested in later stages of our CAP to gain more robust evidence on whether co-writing with community-partners results in better research output and benefits for participants.

RELEVANCE FOR CLINICAL PRACTICE

Collaborative knowledge production is increasingly used to foster changes in mental health care. Mental health care is typically delivered within a multidisciplinary team, largely consisting of a nursing workforce. However, within this dynamic, some professional roles can dominate the team. A co-design process needs to pay particular attention to selecting participants and investing in relationship building to overcome professional hierarchies and cultures. The co-design process would need to ensure that the role and voice of the mental health nursing profession are carefully considered but that the views of professionals beyond mental health nursing and people with lived experience are equally heard. Engaging a professional facilitator and investing enough time in preparing and designing the workshops may help to deliver co-design successfully.

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DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ETHICS APPROVAL

We obtained ethical approval from the ethics committee of the Medical University Innsbruck (No. 1197/2019) for the overall project this article is part of. Participation of and data collection from stakeholders involved in the project and in this article was additionally approved by the Monash University Human Research Ethics Committee.

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SUPPORTING INFORMATION

Additional Supporting Information may be found in the online version of this article at the publisher's website:

Figure S1. Roadmap for the co-design process.

Table S1. Example activities for implementing co-design practices.