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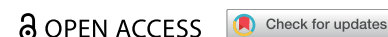


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RESEARCH ARTICLE



Experiences of patients with chronic low back pain plus comorbid depressive symptoms in a videoconference group acceptance and commitment therapy or behavioral activation treatment for depression: a qualitative study

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ABSTRACT

Purpose: To explore the experiences of patients with chronic low back pain (CLBP) plus comorbid depressive symptoms who received a remote synchronous videoconference group form of Acceptance and Commitment Therapy (ACT) or Behavioral Activation Treatment for Depression (BATD).

Methods: A qualitative study (IMPACT-Q) was nested within a randomized controlled trial (RCT) designed to assess the efficacy and the cost-utility/cost-effectiveness of two therapies in the management of CLBP and depression. Fifty-five patients with CLBP plus depression were selected from the RCT. Twelve focus group sessions, each approximately 60–90 min long, were audio-recorded, transcribed verbatim, and analyzed by six coders through a thematic analysis (deductive and inductive) based on a descriptive phenomenological approach.

Results: Patients perceived behavioral, affective, and cognitive improvements after completing group sessions. Overall, psychotherapy was perceived as a safe and non-judgmental place to express emotions and feel understood. The main barriers reported were lack of human contact and loss of social interaction. In contrast, ease of access, flexibility in the ability to connect from anywhere, avoidance of the need to travel, and savings in time and money were key facilitators to increase attendance and adherence to therapy.

Conclusion: This study provided support for the acceptability of videoconference-delivered ACT or BATD in patients with CLBP plus comorbid depressive symptoms.

ARTICLE HISTORY

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KEYWORDS

Chronic pain; depression; acceptance and commitment therapy; behavioral activation treatment for depression; eHealth; qualitative study

► IMPLICATIONS FOR REHABILITATION

- Overall, patients reported behavioral, affective, and cognitive improvements after Acceptance and Commitment Therapy and Behavioral Activation Treatment for Depression group sessions.
- Acceptance and Commitment Therapy and Behavioral Activation Treatment for Depression delivered via videoconference platform were perceived as a facilitator for therapy attendance rather than a barrier.
- The findings indicate that group therapy on videoconferencing is perceived favorably as an alternative for managing patients with chronic pain and comorbid depression.
- Technical and social aspects of implementing videoconferencing therapies should be improved, as well as guidelines for adequate support for patients and therapists should also be provided.

Introduction

Chronic low back pain (CLBP) and depression are common conditions that represent a great challenge for healthcare systems [1]. The prevalence of CLBP worldwide ranges from 4% to 20% [2] and depression among pain patients ranges from 12% to 72% [3], being greater than that reported for the general population [4]. Overall, comorbidity between chronic pain and depression is over 60% [5], creating a significant economic burden [6] and social

impact [7]. Depression in the context of chronic pain is associated with reduced psychological well-being, daily activities, social relationships, and quality of life [8]. In addition, this comorbidity negatively affects treatment adherence and response [9], requiring a multidimensional and specialized approach for its management [10].

Significant developments in psychotherapies for chronic pain and depression in recent years include new forms of Cognitive Behavioral Therapy (CBT), such as Acceptance and Commitment

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Therapy (ACT) or Behavioral Activation Treatment for Depression (BATD). The potential of ACT and BATD to improve pain interference, pain acceptance, and behavioral activation in patients with chronic pain and depression has been empirically evidenced [11–13]. The efficacy of ACT and BATD patients in improving emotional distress is also well established [14–18]. However, some studies have shown that when these conditions coexist, they are more resistant to treatment [9,19–21] as compared to depression alone [22–24].

The experience of the coronavirus disease 2019 (COVID-19) pandemic has highlighted the need for digital technologies and their testing to treat health conditions. In this regard, eHealth, defined as the practice of healthcare delivered via digital tools (computers or smartphones) in the prevention, treatment, promotion, and maintenance of health, has never been more important [25,26]. Previous studies have concluded that internet- and remote-delivered forms of CBT are beneficial for improving depression and chronic conditions [8,27–29]. Specifically, recent meta-analyses demonstrated the benefits of internet-based ACT in chronic pain patients for improving pain acceptance, anxiety, depression, catastrophizing, pain interference, distress, pain intensity, pain disability, and fear avoidance [30,31].

The use of eHealth in clinical practice increased from 7% to 85% during the COVID-19 pandemic, and over the next few years, it is expected that approximately 30% of psychotherapy will be delivered via this format [32]. Particularly, internet- and remote-delivered therapies are highlighted as a useful resource for people with chronic pain due to their easy accessibility [30,31,33,34]. A recent systematic review [35], which included 21 qualitative studies exploring the experiences of chronic pain patients, found that the main facilitators of participation in eHealth interventions were flexibility and patient empowerment, while barriers were lack of contact, technological challenges, irrelevant content, and limited digital (health) literacy. Strengthening internet- and remote-delivered therapies as a complementary or alternative health intervention resource, in addition to face-to-face therapy, requires a detailed exploration of patients' and therapists' opinions, to assure its successful implementation [36–38].

Systematic reviews and meta-analyses to date provide insight into the efficacy of online psychotherapies. However, it appears that there are limited studies of the experiences of using videoconferencing platforms for delivering third-wave CBT, particularly studies that recognize potential barriers and facilitators that could affect adherence and efficacy in group format. Thus, the main objective of this qualitative study (IMPACT-Q), nested within a randomized controlled trial (RCT) [39], was to explore the experiences reported by a group of patients with CLBP plus comorbid depressive symptoms that had participated in ACT or BATD delivered via remote synchronous videoconferencing.

Methods

Study protocol

The main purpose of the IMPACT study was to examine the efficacy and the cost-utility/cost-effectiveness of adding a group-based form of ACT or BATD to treatment-as-usual (TAU) for patients with CLBP plus comorbid depressive symptoms [39,40]. Due to the COVID-19 pandemic, this 12-month, multicenter, RCT, initially designed to deliver therapies in a face-to-face format, was adapted to be delivered through a remote synchronous videoconference platform (Zoom). Among the various technological options available, this one was chosen because it guaranteed a synchronous

and bidirectional interaction, consistent with the needs of both therapies and their group-based delivery format. This RCT was registered in ClinicalTrials.gov (NCT04140838), following the guidelines issued by the Standard Protocol Items: Recommendations for Interventional Trials (SPIRIT) and Consolidated Standards of Reporting Trials (CONSORT).

In brief, both therapies (ACT and BATD) were administered in a group format (maximum 13 patients per therapy) including eight weekly 1.5-h sessions via remote synchronous videoconferencing. Three different therapists guided the groups in each therapy (one therapist per group for ACT and BATD), with technical support from a researcher during the therapy. This study was conducted in accordance with the 1964 Helsinki Declaration and was approved by the Ethics Committee of the Fundació Sant Joan de Déu (PIC-178-19) and the Hospital del Mar (2019/8866/I). None of the patients received any financial incentive for participating in this study. A published study protocol is available [41].

Study design

IMPACT-Q study, which was not contemplated in the original study protocol [41], arose out of the research team's interest in exploring the experiences of patients who participated in these group forms of ACT or BATD administered via videoconferencing during this period of global emergency. A qualitative thematic analysis based on a descriptive phenomenological approach was used to explore patients' experiences after completing ACT or BATD group sessions [42]. Two general topics were explored in this research: (1) patients' experiences related to the therapy and (2) patients' experiences related to the use of technology. This study followed the checklist of Consolidated Criteria for Reporting Qualitative Research [43] and the guidelines of the Journal Article Reporting Standards for Qualitative Research (JARS) [44].

Study context

Patients were recruited between September 2020 and May 2021 [39]. The ACT and BATD programs were conducted in three waves: October to December 2020 (first wave), February to April 2021 (second wave), and May to June 2021 (third wave). The focus groups were conducted no later than one month after the end of each of these waves. It is important to note that this qualitative study was conducted during a fluctuating period of the COVID-19 confinement measures adopted by the Spanish authorities, which encompassed phases of increased (first and second waves) and decreased mobility restriction (third wave). For example, it was identified that a significant proportion of the patients who did not complete the ACT or BATD program or decided not to participate in the focus groups, presented in the third wave (when the mobility restrictions due to the pandemic were relaxed and the pre-holiday period in Spain began). The pandemic created a unique context in which the interventions were delivered. For this reason, the social and health context in which this study was implemented was a relevant element to consider in the exploration and interpretation of patients' experiences.

Participants

A total of 234 patients participated in the RCT: 78 were assigned to ACT, 78 to BATD, and 78 to TAU [39]. Of the 156 patients who participated in the active interventions (ACT or BATD), 94 completed the group sessions (ACT = 52 and BATD = 42). The 62

patients who did not complete the active interventions program (ACT = 26 and BATD = 36) did not participate in the qualitative study due to the impossibility of contacting them or their lack of interest in continuing to contribute to the project. All 94 eligible patients were invited by telephone and email to participate in this qualitative study, but 23 did not respond. As shown in Figure 1, from the 71 patients who initially agreed to participate in the focus groups delivered via Zoom, 16 ultimately did not participate due to time availability. Finally, 55 patients completed the focus groups: 31 from ACT and 24 from BATD.

The selection of patients for this study was intentionally established. Specifically, the experiences of all patients who completed the active intervention sessions and agreed to participate in this qualitative study were explored. Because the purpose of this qualitative study was to explore the experiences of a significant set of patients with these therapies, it was decided not to use saturation as a criterion for determining data collection. This decision was also supported by the arguments recently published by Braun and Clarke [45] regarding the relevance of saturation in thematic analyses.

Interventions

This study explored the experiences of a group of patients who participated in ACT or BATD. ACT is an intervention that promotes acceptance of unwanted experiences and commitment to goal-oriented and value-based actions [46], whereas BATD applies learning principles to the pattern of withdrawal or reduction of behavioral activity related to depression [47]. The ACT sessions were based on the protocol proposed by Vowles et al. [48] and the BATD sessions on the protocol proposed by Lejuez et al. [49]. Patients who received these interventions continued with their usual treatment during the RCT. Following the Spanish standards [50], TAU consists of medication (analgesics, anxiolytics, anti-inflammatories, opioids, and/or antidepressants), psychoeducation, and suggestions for aerobic exercise. A more detailed description of the characteristics of both interventions is available in Sanabria-Mazo et al. [39,40].

Data collection

The focus groups were conducted via Zoom by five researchers, of which three were female (NGU, GNR, and GVM) and two were male (JMPS and ÓFV). Before starting the focus groups, these researchers were previously trained in qualitative data collection and analysis procedures. All had master's degrees in health psychology and worked as psychologists specializing in mental health. The focus groups were led by the researchers who provided technical support to patients and therapists during the eight sessions of each therapy group. Because patients were familiar with the researchers this is likely to have enhanced rapport, and because the researchers had not delivered the treatment this may have encouraged participant responses. Focus groups were used as an interactive data collection technique to reflect on the experiences of the patients who participated in the group therapies [51,52].

The objective of this qualitative study was explained at the beginning of the focus group. In total, 12 focus groups (six for ACT and six for BATD) were conducted between January and July 2021. These included three to six patients (who were part of the same therapy group in which they participated), lasted between 45 and 90 min, and were completed one month after the post-treatment assessment, to avoid temporal interference with the other assessment points of the IMPACT study [39]. The questions used in the focus groups were validated by five project researchers (JPSM, AFS, SE, AS, and JVL) and approved by all the authors of this article, considering the main objectives of the study. Two leading questions were included for open exploration of participants' experiences with therapy (*how was your experience participating in this therapy?*) and technology use (*how was your experience participating in this therapy via videoconference?*). The list of main questions addressed during this study is included in Supplementary Table 1. During the focus groups, the five researchers noted down all the observations they considered relevant to this study. These notes, as indicated below, were used to complement the interpretation of the results.

Data analysis

The focus group sessions were audio-recorded, transcribed verbatim, and analyzed by six coders (JPSM, ACC, NGU, JMPS, GVM, and MFM) using Atlas.Ti (v. 7.5). During this process the patients' names were replaced by a code to ensure the confidentiality of their data. The data were analyzed by open, axial, and selective coding, applying thematic analysis (deductive and inductive) [53]. At first, coders independently designated relevant fragments and coded them using deductive analysis (i.e., from predefined themes) [54,55]. These themes, defined by the research team (composed entirely of clinical and health psychologists) to explore the main purpose of this study, were: (1) patients' experiences related to the therapy and (2) patients' experiences related to the use of technology. The analysis was performed independently to reinforce the rigor of data processing. Subsequently, inductive analysis (i.e., subthemes derived from data, instead of predefined themes) was used to classify all fragments into subthemes.

After analyzing each focus group, the coders (JPSM, ACC, NGU, JMPS, GVM, and MFM) met to discuss the identified subthemes and redefine the coding scheme (when discrepancies were detected). When all codes were obtained, coding schemes with example codes were developed by constantly comparing similarities and dissimilarities in the data. The final coding was validated by the research team after completion of the analysis. After that, the final analysis was adjusted according to the consensus themes

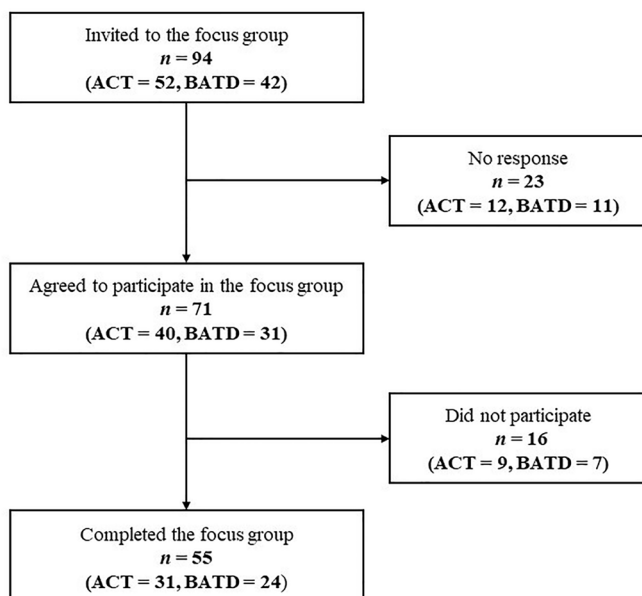


Figure 1. Flowchart of patients who participated in IMPACT-Q.

Patients' experiences

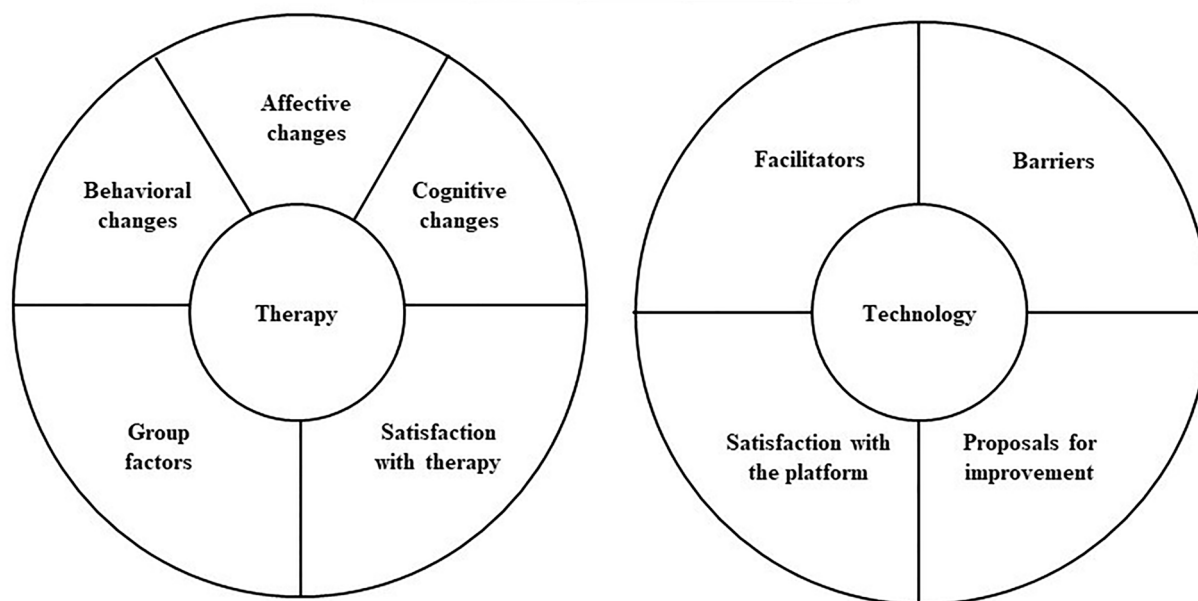


Figure 2. Themes and subthemes of analysis of this study.

and subthemes (see Figure 2). The final interpretation and synthesis of the results presented below were carried out by the first author (JPS-M). To reinforce the rigor of the interpretation of the results, the five researchers in charge of the focus groups (NGU, JMPS, GNR, ÓFV, and GVM) were asked to validate the final interpretation. The purpose of this final validation was to contrast the interpretation of the results with the notes that they collected during the focus groups, which were in turn based on the information they already knew about the patients' participation during the therapies [53].

Reflexivity

The research team reflected on possible ideas that could have influenced the data collection and analysis [56]. Following the AMEE Guide No. 149, personal (i.e., expectations, assumptions, and reactions to contexts, participants, and data), interpersonal (i.e., the influence of the relationships surrounding the research), methodological (i.e., consideration of researchers' paradigmatic orientations and decisions), and contextual reflexivity (i.e., social, cultural, and historical factors in which the study was implemented) was especially considered during this analytical process [57].

Reflexivity was adopted in all phases of the study to ameliorate the potential impact of subjective influences on the exploration of this phenomenon [56]. After completing the interpretation of the results, a group reflective discussion was held to recognize specific aspects that may have influenced this study [57]. In general, four elements were considered during the exploration and interpretation of the phenomenon: (1) the expectations of the research team (personal factor), which could be indirectly associated with the quantitative results of the RCT; (2) the social desirability of the participants (interpersonal factor), which could have facilitated favorable responses regarding the therapies due to the previous bond between the patients and some of the researchers; (3) the collective nature of the discussion during the focus groups (methodological factor), in which dominant perspectives are more

easily socially articulated ("collective sense-making"); and (4) the implementation of the therapies by videoconference due to the COVID-19 pandemic (contextual factor), which could have influenced the meanings attributed to the experience or the type of connection of the participants toward the interventions.

Data synthesis

The selected quotes below were used to support the qualitative analysis and were labeled according to patient identification code (ID) to facilitate recognition of sociodemographic characteristics. Considering that the purpose of this study was to explore patient experiences of these two third-wave CBT therapies (i.e., ACT and BATD), some results are presented in parallel, except as specified in the description. Although some results regarding experiences with the therapies are presented in parallel to expand on the narratives of the patient groups, it was not the aim of this study to compare the two interventions, but rather to gain an integrated understanding of the experiences reported by participants.

Results

Sample description

A total of 55 patients with CBLP and comorbid depressive symptoms participated in the IMPACT-Q study: 31 in ACT and 24 in BATD groups. The age range of ACT patients was 35 to 70 ($M=57.32$; $SD=7.96$) and of BATD was 44 to 69 ($M=59.38$; $SD=8.13$). The time since diagnosis of chronic pain as communicated by ACT patients ranged from 2 to 30 years ago ($M=10.55$; $SD=9.13$) and by BATD patients from 1 to 35 years ago ($M=13.88$; $SD=10.58$). The number of sessions attended by ACT patients fluctuated from 3 to 8 sessions ($M=7.13$; $SD=1.18$) and by BATD patients from 6 to 8 sessions ($M=7.46$; $SD=0.72$). Overall, 71% of ACT and 84% of BATD patients were female. At the time of the study, 48% of ACT and 25% of BATD patients were unemployed.

Table 1. Socio-demographic characteristics of the patients.

Patient ID	Therapy	Sessions attended	Years of diagnosis	Age	Gender	Civil status	Education level	Work status
01	ACT	6	16	54	Male	Married or paired	University	Unemployed
02	ACT	8	8	49	Male	Married or paired	University	Employee on sick leave
03	ACT	8	7	70	Female	Widow	Secondary	Retired
04	ACT	8	30	60	Male	Married or paired	Primary	Unemployed
05	ACT	8	2	43	Male	Single	Primary	Unemployed
06	ACT	8	7	66	Female	Married or paired	Secondary	Active
07	ACT	5	2	55	Female	Married or paired	Secondary	Unemployed
08	ACT	8	9	58	Female	Married or paired	Secondary	Unemployed
09	ACT	6	29	64	Female	Married or paired	Secondary	Unemployed
10	ACT	7	3	55	Female	Married or paired	No studies	Household
11	ACT	8	10	48	Female	Married or paired	Secondary	Active
12	ACT	8	5	61	Female	Single	University	Active
13	ACT	8	25	67	Female	Married or paired	Primary	Retired
14	ACT	7	5	52	Female	Single	Secondary	Unemployed
15	ACT	7	3	53	Female	Widow	Secondary	Unemployed
16	ACT	7	36	68	Female	Married or paired	Primary	Retired
17	ACT	3	6	54	Female	Married or paired	Secondary	Unemployed
18	ACT	8	15	55	Male	Married or paired	Secondary	Unemployed
19	ACT	7	17	51	Male	Married or paired	Primary	Unemployed
20	ACT	6	2	57	Female	Married or paired	Secondary	Active
21	ACT	6	11	65	Female	Married or paired	Primary	Household
22	ACT	6	5	58	Female	Widow	Secondary	Unemployed
23	ACT	8	5	64	Female	Married or paired	University	Employee on sick leave
24	ACT	8	7	35	Male	Married or paired	Secondary	Active
25	ACT	6	4	46	Female	Single	Secondary	Active
26	ACT	8	6	57	Female	Married or paired	University	Unemployed
27	ACT	7	8	60	Male	Married or paired	Primary	Unemployed
28	ACT	8	4	65	Female	Separated or divorced	Secondary	Unemployed
29	ACT	8	21	63	Female	Married or paired	Secondary	Active
30	ACT	7	3	58	Female	Married or paired	Secondary	Employee on sick leave
31	ACT	8	16	66	Male	Separated or divorced	University	Retired
32	BATD	8	10	55	Female	Married or paired	Secondary	Unemployed
33	BATD	7	25	54	Female	Married or paired	University	Unemployed
34	BATD	8	5	69	Female	Widow	Primary	Retired
35	BATD	8	10	68	Female	Married or paired	Secondary	Retired
36	BATD	8	30	62	Female	Married or paired	Primary	Active
37	BATD	7	30	56	Female	Married or paired	Secondary	Unemployed
38	BATD	7	7	63	Female	Single	Secondary	Active
39	BATD	8	35	65	Female	Married or paired	Secondary	Active
40	BATD	8	6	50	Female	Married or paired	Secondary	Unemployed
41	BATD	8	5	64	Female	Widow	Primary	Household
42	BATD	6	20	69	Male	Married or paired	Secondary	Retired
43	BATD	8	23	67	Female	Married or paired	University	Active
44	BATD	8	34	56	Female	Married or paired	University	Unemployed
45	BATD	8	16	64	Female	Separated or divorced	Primary	Active
46	BATD	8	6	65	Male	Married or paired	Secondary	Retired
47	BATD	8	6	60	Female	Married or paired	University	Active
48	BATD	6	3	59	Female	Separated or divorced	Secondary	Employee on sick leave
49	BATD	7	1	66	Female	Widow	Primary	Retired
50	BATD	6	8	46	Male	Married or paired	Secondary	Employee on sick leave
51	BATD	7	6	69	Female	Married or paired	Primary	Retired
52	BATD	7	10	44	Female	Married or paired	Secondary	Employee on sick leave
53	BATD	8	18	62	Female	Married or paired	Primary	Household
54	BATD	8	3	47	Male	Married or paired	Secondary	Unemployed
55	BATD	7	16	45	Female	Single	Secondary	Active

All patients resided in Catalonia and were mostly white Europeans. The characteristics of each patient are detailed in Table 1.

Experiences related to the therapy

The patients' experiences related to the therapy mainly reflected: (1) behavioral changes, (2) affective changes, (3) cognitive changes, (4) group factors, and (5) satisfaction with the therapy.

Behavioral changes

Patients allocated to ACT reported that they learned to be more proactive, to be open to new experiences, and to set healthy

limits to improve their quality of life. Some patients also informed that setting small daily goals allowed them to make an overall assessment that helped them to improve their health status.

I try to do my things little by little every day. When you achieve small results, it helps you to believe that you can improve. Now I try to focus on the positive aspects. If I go out for half an hour, I count that as progress (Patient ID 19: female, 63 years old).

Similarly, BATD patients learned to define their weekly goals, incorporate healthy habits into their lives, express their emotions more freely, be less strict with themselves, and reconnect with pleasurable activities they avoided because of pain. Several patients agreed that being more organized, structured, and flexible

with their personal goals helped them to improve their well-being and quality of life.

I am doing things that I had stopped doing a long time ago, and that makes me feel very good. I'm not giving anything up now, I'm trying to do as much as I can. Now I walk every day, which I had given up, and that is helping me to break the negative dynamic I was in (Patient ID 38: male, 51 years old).

Affective changes

Almost all ACT patients perceived an improvement in their mood. They pointed out that releasing blocked emotions, managing their resources, acknowledging their experience of pain to others, and feeling understood by people with the same health condition helped them to feel more comfortable. Specifically, one patient reported increased empathy for the pain experiences of others.

On the days when there was a session, my morale was very high. The fact that I was interacting with more people like me, with people with pain and problems like mine, made me feel less lonely and more accompanied. It was a great help (Patient ID 05: male, 43 years old).

Most BATD patients described that being more active in their daily lives helped them to feel in a better mood. Others highlighted that after completing the therapy they had learned not to let their pain get the better of them. For some of them, finding that they could return to pleasurable activities was synonymous with empowering themselves to "move on." In this regard, one participant reported that participating in the sessions allowed her to feel "alive again."

This therapy has helped me to feel that I am alive again. It has reminded me that I must not give up and must keep fighting every day to stay ahead. Being part of this group has been a very enriching experience for me (Patient ID 37: female, 56 years old).

Cognitive changes

Many ACT patients reported changes in their relationship and stance with their health condition. Particularly, they described learning to be in contact with the present moment, to be more compassionate about their situation, to accept chronic pain as part of their life, and to be more tolerant of daily difficulties. Some patients described developing strategies such as turning their attention away from the pain and boosting their positive attitude.

It is easy to say: "I feel so bad", and then fall into depression. So, you have two problems: pain and depression. But if you realize that with a positive attitude, you can do a lot for yourself, you can improve your quality of life (Patient ID 08: female, 58 years old).

Some BATD patients mentioned acting for themselves to break the negative spiral between pain level and depression symptoms, to become aware of the harmful effects of disruptive thoughts, and to recognize that they can carry out activities even with some restrictions. Others remarked that although the therapy had not helped them to reduce their pain intensity, it allowed them to reconnect with themselves and avoid judging their emotions.

I have learned to find strength in those moments when I am most lacking in enthusiasm and happiness. Even though it is hard to break the negative spiral, I now try to give a little more of myself. Doing more things than before, makes me feel much better (Patient ID 33: female, 54 years old).

Group factors

ACT and BATD patients highlighted that being connected to weekly sessions helped them create a space to express all their progress. They revealed that recognizing that there are other people struggling with pain helped them feel more understood and less judged. In addition, having a place to share their experiences was an opportunity to free themselves from the frustration of feeling isolated. Similarly, as an emergent issue, they highlighted that participating in these sessions had been helpful as a source of social activity in times of mobility restrictions imposed during the pandemic.

I was in a bad state of mind. It helped me to share my current health conditions with the group, especially in these times of pandemic. Attending these sessions and having a space to express my emotions has been positive for me. This came at the right time (Patient ID 02: male, 49 years old).

Satisfaction towards therapy

Beyond the therapy type, all patients indicated that they were satisfied and grateful to participate in the therapy sessions. Repeatedly, they expressed they would like to engage in a more extensive therapeutic program to deepen their experience of specific components of the therapy and to be provided with individual space to address personal issues. Some patients in ACT pointed out they would like to have more practical tasks in sessions, and fewer metaphors, to make it easier for everyone to comprehend.

I enjoyed the therapy, although I found it a bit short. I think that what they teach us in each session is very useful for our mental health. The simple fact that you must connect to the weekly sessions and talk, forces you to move, to be better (Patient ID 36: female, 62 years old).

Additionally, one BATD patient suggested that creating groups according to pain severity could help all patients feel more comfortable and understood. Other BATD patients perceived an overload of information during the sessions. Therefore, they suggested simplifying the content of each session into more specific educational and psychological components. Almost all patients agreed with the implementation of these therapies in the public health system for chronic pain and comorbid depressive symptoms to promote adequate emotional regulation.

Experiences related to the use of technology

The patients' experiences related to the use of the technology indicate: (1) barriers, (2) facilitators, (3) satisfaction with the platform, and (4) proposals for improvement.

Facilitators

The majority of ACT and BATD patients indicated that this was the first time they participated in a group-based therapy delivered via videoconferencing. The positive aspects of participating in therapy via this platform were avoiding additional journeys, having the flexibility to be connected from elsewhere according to their daily needs, saving time and money in transport, increasing their proactive ability to participate in the groups, and facilitating their attendance and adherence. In addition, many patients stated that these therapies are especially useful for people with chronic pain, as well as in times of pandemics, to avoid the risk of contagion.

I like that you can connect at any time, and you don't have to move. It's very comfortable and flexible: you can connect from your mobile, tablet, or computer, no matter if you're in your car or home. Moreover, it is very practical for people with chronic pain (Patient ID 52: female, 44 years old).

Barriers

In contrast, the negative aspects identified were losing face-to-face contact during the sessions, losing the opportunity to set off from home and change the usual space, and missing the moments of social interaction before and after the sessions. Some patients also described that lack of resources, such as a private place to attend the sessions, an adequate internet connection, a suitable device (smartphone, tablet, or computer), or having limited technological knowledge, interfered sometimes during therapy.

I would have liked the sessions to be face-to-face so I could go out, move around, change spaces... Connecting from home is not bad, but I prefer direct contact with people because it helps me to distract myself and, above all, socialize (Patient ID 29: female, 63 years old).

Satisfaction with the platform

Beyond the specific therapy received, patients acknowledged the advantages of participating in therapy groups delivered via videoconferencing, but several indicated a preference for face-to-face treatment if available. One of the main positive points for some of them was the feeling of increased self-competence for being able to use a technology that was unfamiliar to them. In other words, they perceived an increase in their digital literacy. Overall, they recognized that implementing eHealth in the public health system would contribute to savings in healthcare costs.

Applying therapies in this format is a way to save time, space, and costs. This allows you to start a therapy and finish it, according to your needs and your rhythms. Because it is online, you can reach more people with pain, no matter where they are in the world (Patient ID 14: female, 52 years old).

Proposals for improvements

Some patients suggested that blended therapies combining face-to-face and online sessions could be a strategy to bring out the strengths of each modality. As mentioned above, other potential improvements identified by some patients would be to create groups according to pain severity. Some recommended reducing the number of patients per group to encourage participation and facilitate a more personalized intervention. Others suggested scheduling an initial technology training session to help them adapt to the online sessions. Similarly, one patient stated that it was also important to train therapists in the use of technological platforms.

I would be in favor of combined therapy: two or three online sessions to get to know each other and, afterward, some face-to-face sessions to have contact with the group. Alternating face-to-face with online sessions would help to make it more dynamic (Patient ID 44: female, 56 years old).

Discussion

This qualitative study (IMPACT-Q) was nested within an RCT investigating the efficacy and cost-utility/cost-effectiveness of two third-wave treatments for patients with CLBP plus depression. Beyond the therapy type, patients perceived behavioral, affective,

and cognitive improvements after completing their treatment, and overall improvements in emotion management and quality of life. The perception of changes reported by patients in both therapies is partially consistent with the results obtained in the RCT efficacy study, which identified a statistically significant improvement in pain interference, pain catastrophizing, pain acceptance, behavioral activation, and psychological flexibility, but not in the reduction of depression, anxiety, and stress symptoms [39]. The differences identified in the improvement of emotional disturbances, where a marginal trend towards significance was observed in the RCT, is a relevant contribution of this qualitative study, which recognizes the importance of participants' experiences in understanding the therapeutic potential of both therapies.

Another relevant finding of this qualitative study is that patients highlighted that being part of these therapy sessions promoted a group identity that helped them to feel more understood and accompanied in their health condition, especially during restrictions imposed during the COVID-19 pandemic. Moreover, most of the patients agreed on the benefits of freely sharing their emotions related to their health care condition, in a therapeutic context, without feeling that they are overwhelming their relatives and other close personal relationships. Particularly, the non-judgmental environment of therapy encouraged compassion toward self and others within the groups. In this regard, a growing body of research suggests that group cohesion is a factor with great potential to improve individual patient outcomes [58,59]. Specifically, group identification and cohesion have been identified as a therapeutic mechanism that contributes to the improvement of personal control and thus facilitates the management of chronic pain in patients [60].

Patients who participated in psychotherapy sessions delivered via a videoconferencing platform expressed satisfaction with the therapy and strengthened confidence in using this technology. This may be a result of the synchronized two-way interactions provided here, as in conventional group therapy. Having met others with a similar clinical problem in the online sessions, patients experienced an enhanced sense of well-being. At the same time, patients agreed to receive in-person therapy is also important. Even though some barriers were identified in the technological implementation of these therapies (such as losing face-to-face contact, missing out on physically different intervention spaces, going out from home, and dispensing with moments of socialization), both were generally perceived to be psychologically beneficial for people with chronic pain and depression. In this regard, the most important benefits were to avoid additional journeys and to save time and money on transport, as well as the ability to connect from different settings according to their needs. Taken together these were seen to facilitate attendance and adherence to the therapy.

As mentioned above, patients in both therapies perceived positive psychological changes after completing the groups, which are consistent with those obtained in the RCT efficacy study [39]. Like previous studies with chronic pain samples, the patients perceived a positive impact of ACT and BATD on mood, social relationships, behavioral activation, and self-care [15,17,30,31,61]. Although several patients in both groups perceived no change in pain intensity, they reported a decrease in pain catastrophizing, as well as an increase in pain acceptance [9,21] and quality of life [20,24]. Consistent with other studies, ACT patients reported more improvements related to pain acceptance [30,31,36] and BATD patients to behavioral activation [19,38], partially consistent with the main intervention target and theoretical orientation of each therapy [19].

In line with previous qualitative studies, patients commented that being part of a therapeutic group had allowed them to feel understood and less judged [36,38,62,63]. They also indicated that attending the sessions was an opportunity to talk about their daily problems, reinforce acquired habits, evaluate progress toward goals, and feel less lonely [64,65]. In this sense, numerous studies have shown that feeling listened to by others contributes to both the acceptance of pain and the development of active coping strategies [36,38,62,66], a typical unspecific effect of joining a psychotherapy group. Even though several patients indicated that the virtual format facilitated greater emotional openness during the sessions, some expressed that the lack of face-to-face contact and moments of socialization interfered with their attention to the therapy. The findings of this qualitative study are consistent with experiences described in other group interventions delivered via videoconferencing [35,36,38].

Repeatedly, patients highlighted the relevance of offering group therapy via videoconferencing during the COVID-19 pandemic to increase patient care coverage, decrease costs, and reduce potential risks of contagion [37]. Results from the RCT indicate that group-based forms of ACT or BATD delivered via videoconferencing are potentially cost-effective interventions [40]. The quantitative and qualitative findings of the IMPACT study [39–41] highlight the importance of continuing to investigate the clinical and economic benefits of therapies administered by videoconference in the chronic pain population, especially in terms of costs, accessibility, convenience, flexibility, and effectiveness. As mentioned in other studies, the need for further development of digital resources for adequate monitoring and treatment of pain is increasingly evident [25,26].

Further research is needed to identify the benefits and costs of videoconferencing therapies in group format [67,68]. It appears that undertreated chronic pain due to the pandemic situation created widespread feelings of isolation in patients and indirectly impacted the overload of the public health care system [69]. The investment of digital resources that guarantee adequate monitoring of pain development and promote eHealth appears indispensable in this pandemic era [25,26]. According to the findings of this qualitative study, the implementation of therapies in this format in the public health system requires ensuring access to the necessary resources (a private place, an adequate internet connection, or a suitable device) and more technical support for patients and therapists, especially those without previous technological experience [37]. Other important aspects for the implementation of both therapies are to increase the number of sessions, suggest more practical tasks between sessions, include additional sessions to strengthen specific psychoeducational components, and provide spaces for individual intervention.

Limitations

These findings must be interpreted with caution. First, as this was a purposive sample, not all patients who participated in the RCT were included. However, the considerable number of patients included in this study contributed to the exploration of experiences related to both therapies. Second, the experiences of patients who did not complete the ACT or BATD program or therapists were not explored in this research, which could add more depth to the interpretation of these findings. Similarly, it would have been valuable to explore the views of invited patients who did not participate in the qualitative study, and who had the lowest attendance in the groups. Third, in this qualitative study based on a descriptive phenomenological approach, focus

groups (rather than in-depth interviews) were used to explore individual experiences, which may have affected the interactional nature of the situation and, therefore, the data produced. The collective nature of the discussion (“collective sense-making”), the fact that individual narratives can get lost in the dialogue between participants, and the social situations that focus groups represent (in which for instance dominating perspectives are socially most easily articulated) are relevant aspects to consider.

Fourth, the fact that five different researchers conducted the focus groups may have impacted the standardized exploration of patients’ experiences. Nevertheless, to minimize these effects, all interviewers were trained in the collection of the data, and all researchers reached an agreement regarding the analysis procedure of the qualitative data for this project. Fifth, considering that patients had a prior relationship with their interviewers, there is a possibility that responses were influenced by social desirability. Finally, patients were not included in the final validation of the analyses in this study, which could have helped to gain a more reliable perspective on the interpretation reported by the research team. It is suggested that future qualitative studies integrate participants to ensure a more reliable interpretation of their experiences.

Strengths

It appears that this is the first qualitative study to investigate the experiences of patients with chronic pain plus comorbid depressive symptoms who participated in a remote synchronous videoconference group form of ACT or BATD. The strengths of this study were the large number of patients who shared their experiences in the focus groups, the three waves of data collection to minimize the potential influence associated with the specific timing of data collection, and the adherence to COREQ guidelines. Another aspect to highlight is that the five researchers in charge of the focus groups received prior training in qualitative data collection and analysis. This training, added to the previous relationship with the patients (which was established while providing technical support to the therapists), was an element of great relevance in enriching the interpretation of the results of this study.

Future research lines

The findings of this qualitative study could be transferable to populations with similar demographic and clinical characteristics who participated in interventions during the COVID-19 pandemic. There is a possibility that some therapeutic effects of ACT and BATD—documented in previous clinical trials—such as improvement in emotional disturbances (depression, anxiety, and stress), were diminished by the implementation of these interventions via videoconferencing, as well as by the high percentage of patients withdrawing from the intervention (which were like those of other studies conducted during the pandemic). Considering the emergency context in which this study was developed, it is recommended to continue exploring the experiences of patients with this comorbidity in group forms of these therapies administered by videoconference. Findings from future studies could help expand information about the role the COVID-19 pandemic played in these experiences and on the overall satisfaction with the implementation of these group therapies via videoconferencing.

Methodological rigor

This qualitative study followed the four criteria defined by Lincoln and Guba to guarantee the credibility, transferability, dependability,

and confirmability of the reported findings [70]. To ensure credibility, an accurate presentation of all methods used in the data collection and analyses of this study was reported. In this process, aspects relevant to the interpretation of the results were acknowledged, such as the intentional selection of patients for both therapies. To ensure transferability, information was provided on the demographic and clinical characteristics of patients on both therapies, as well as information on the unique context in which this research was developed (which, as mentioned above, arose in response to the therapeutic demands of the COVID-19 pandemic). To ensure reliability, information was provided about the procedures carried out for the design and execution of this qualitative study nested to an RCT, thus facilitating the replicability of the methods. Finally, to ensure confirmability, the strategies implemented to detect the possible influence of the research team's preconceptions (reflexivity) in the interpretation of the findings were recognized [71].

Conclusions

The COVID-19 pandemic has highlighted the importance of videoconferencing as a tool to assist patients with chronic pain. The implementation of eHealth in the public health system is a growing challenge for both therapists and patients. Overall, the findings of this study provided support for the acceptability of remote synchronous videoconferencing in patients with CLBP plus comorbid depressive symptoms. In addition, the importance of group identification and cohesion is highlighted as a mechanism that contributes to disease management in patients with chronic pain. Even though the experiences with this therapy format were perceived as beneficial for this profile of patients, further technical improvements are needed for its implementation in healthcare settings. For this purpose, more research is required to identify the specific needs of patients, therapists, and healthcare institutions.

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Author contributions

Conceptualization: JPSM, ACC, and JVL; *data curation:* JPSM and ACC; *formal analysis:* JPSM, ACC, JMPS, NGU, GVM, and MF-M; *funding acquisition:* JVL; *investigation:* JPSM and ACC; *methodology:* JPSM, ACC, and JVL; *project administration:* JPSM and JVL; *resources:* JVL; *software:* JPSM and ACC; *supervision:* AS, SEI, and JVL; *validation:* AFS, LMM, AS, SEI, and JVL; *visualization:* JPSM; *writing – original draft:* JPSM; *writing—review and editing:* JPSM, ACC, NGU, JMPS, GNR, OFV, GVM, MF-M, GCR, AFS, LMM, AS, SEI, and JVL. All authors have read and agreed to the published version of the manuscript.

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Informed consent statement

Informed consent was obtained from all participants involved in the study.

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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.

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