

# Online Family Intervention for Caregivers of People with Severe Mental Disorders in Psychosocial Rehabilitation Centers

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## Abstract

**Background:** The use of new technologies and online interventions with family members of people affected by Severe Mental Disorders (SMD) seems to emerge as a promising complementary strategy to face-to-face care.

**Objectives:** The article presents a new online intervention format, aimed at relatives of persons with SMD.

**Methods:** A qualitative methodology sequenced in seven phases has been used.

**Results:** (1) The incorporation of relatives into the program has allowed the intervention format to be adapted to the needs and opinions of the relatives themselves. (2) All the relatives were completely satisfied with the new online intervention format, and with how useful it had been for them.

**Conclusions:** (1) The attention and support to family members of people with SMD through the Internet is a complementary intervention strategy to face-to-face care. (2) The online format of attention to family members can be incorporated into the usual practice of care services.

**Keywords:** New technologies; Family intervention; Severe mental disorder; Psychosocial rehabilitation.

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### New online family intervention format. Origin and context

In order to contextualize the origin of this new intervention format, it is necessary to briefly describe the context in which it arose. For more than two decades, the Mental Health Network (MHN) of Gran Canaria (Spain) has been developing a program of care for family members of people with SMD, called the "Family Support and Collaboration Program" (FSCP. In the article, its Spanish acronym PACF will be used), which in turn is part of the Mental Health Network's Island Psychosocial Rehabilitation Program. The PACF is described in the two editions of the work entitled "Guide of Family Intervention in Schizophrenia" [1,2]. Subsequently, two revisions and updates of the PACF were made (2016, 2020). The latest revision of the PACF is described in the recent edition of the same work [3]. In its face-to-face multifamily format, the PACF has been implemented by different services of the MHN. The difficulties generated by the situation of the COVID-19 health crisis and confinement were the origin of this new online format of family intervention. It was necessary to open a new channel for the intervention that had been carried out in person. It is for this reason that it was decided to address the design of the new intervention format for its subsequent implementation in the Network of Psychosocial Rehabilitation Centres (NPRC. The Spanish acronym CDRPS, will be used in the article). Beforehand, a review of the available literature on networked family interventions was carried out [4], incorporating some elements of the works reviewed into the new format. They were as follows:

- Incorporate family members in the construction of the format: This aspect has been recommended as a quality component associated with networked interventions for caregivers [5-7].
- Select the key areas to evaluate in the intervention regardless of the acceptability and satisfaction expressed by relatives [8].
- Adjust the intervention to the needs and characteristics of the target population, incorporating institutional decision-makers in the deployment of the intervention [9].
- Integrate into the new format, strategies to support families not only as relatives of the patient, but also as individuals with other responsibilities and tasks in their lives [10].
- Integrate in the new format and in a complementary way, some strategies used in cognitive behavioural therapy and contextual therapies [11-19].

The implementation of this program completes the review process of digital interventions for caregivers carried out by the group of authors [4] and provide results on the implementation of the new intervention format. In January 2021, it is decided to undertake the design of the new format and its subsequent implementation in the CDRPS Network. In March 2021, started the Multifamily Intervention (MFI) via Internet.

#### Selected sample

The CDRPS coordinators decided to implement this intervention, as a pilot experience, in the oldest multifamily group that was in functioning. It is planned to implement this new online format throughout the CDRPS network, as a complementary intervention strategy, but not as a substitute for the face-to-face format. The group was composed of 7 families and a total of 10 family members participated.

### Construction and implementation of the new intervention format

The phases and tasks developed for the construction and implementation of the new intervention format are described below.

#### Construction of the new format

##### PHASE 1:

Was developed in four stages, each with specific tasks, which are presented sequentially, although in practice they overlapped temporally:

- Stage 1: Elaboration of work schedule.
- Stage 2: Development of an "ad hoc" survey to gather the opinion of relatives on the new intervention format.
- Stage 3: Formal request for the provision and enabling of technological means to the professional team.
- Stage 4: Conducting interviews with users to inform them of the new online family intervention format that was to be implemented and requesting authorization for the participation of their family members.

As has been pointed out, for the construction of the new intervention format it was considered necessary to incorporate family members in the process, aspect that has been recommended as a quality component associated with networked interventions for caregivers. But it is also closely related to the collaborative approach between family members and professionals that has guided the PACF program since its inception. The experience of working with multi-family groups over these years allows us to affirm that families usually know their competencies, strengths and difficulties and that, in addition, they have knowledge and experience of the patient's illness and the nature of their relapses. It is therefore necessary that the family intervention, whether face-to-face or in a network, is carried out in such a context of collaboration and mutual support between family members and professionals. For the team of authors, the aim of psychoeducation should not be to "provide information" but to "share information", along the lines of [20], in her suggestive contribution. Therefore, family members' views on the new intervention format were a key element.

A survey was developed for this purpose. See Annex 1. All annexes are presented in the final Technical Supplement. For the elaboration of the survey, some basic elements identified in the reviewed literature were considered, related with the following seven main themes that the survey explored:

- Contents considered relevant for inclusion in the new intervention format.
- Preferences on the form of presentation of contents.
- Technological supports and skills.
- Preferred technological means.
- Time and contact preferences.
- Inclusion of affected family members in sessions.
- Privacy.

In order to implement the new intervention format, some obstacles had to be overcome. The main one was the lack of

resources. The COVID-19 alert period also helped to highlight some of the shortcomings of the care systems. At the beginning of 2021, it was not possible to carry out online sessions or install applications on the professional team's computers, which lacked the most basic technological elements (Webcam, headset-microphone).

For this reason, a formal request had to be made to the institution responsible for the services, to provide and enable technological means for the professional team. This institutional involvement and the involvement of those responsible for the services in the resolution of the problem, and their subsequent participation in the new intervention format, was essential.

For the new intervention format, an adaptation of the PACF (multi-family format) that had been developed in person in the CDRPS Network was carried out. The criteria used were the following:

- Firstly, the experience of the professional team after 20 years of working with groups of families and the results of the survey applied to the family members selected to participate in the online intervention.

- Secondly, the incorporation and integration into the new format of other elements noted in the reviewed literature. It is worth noting: [21], the authors conduct a study on the effectiveness of a psychoeducational program via the Internet for schizophrenic patients and caregivers compared to standard treatment. They find a significant reduction in positive symptoms and an increase in knowledge of illness compared to their standard care counterparts. As a conclusion, they suggest that online delivery of treatment and educational resources to consumers' homes offers considerable potential for improving their well-being; [22], the authors of this systematic review conclude that family intervention can only be implemented if it is considered a shared goal by all members of the clinical team, including the leaders of the organization; [23], the authors highlight the need to involve people with SMD and their loved ones in the design of new family interventions that are more oriented to the real needs of families; [24], the authors suggest the use of strategies to promote one's own wellbeing, including mindfulness and exercises based on cognitive behavioural therapy; [25], the results of this meta-analysis regarding the lower evidence of effectiveness of networked caregiver interventions on burden, quality of life, coping and social support, deserved special consideration in the new format; [26], the authors indicate that online programs for caregivers have an acceptable cost-effectiveness relation, and allow for the safe delivery of, information and support to family members of people with SMD; [27], the authors indicate that online psychoeducation can save costs and facilitate family members' access to services.

In the last stage of this first phase, interviews were conducted with users to inform them of the new online intervention project that was to be implemented and of the survey that had been prepared, requesting their consent and authorization for their relatives to participate in the group sessions. All users showed their agreement and signed the authorization document used in general for the multifamily interventions carried out in the CDRPS Network.

## PHASE 2:

The Phase 2 was developed in five stages, with corresponding tasks presented sequentially although in practice some overlapped in the time.

- Stage 1: Application and valuation of the results of the survey.
- Stage 2: Return of information to family members on the results of the survey applied.
- Stage 3: Presentation of the 1st draft of the new format to relatives for their consensus, and additional document with basic instructions on requirements for access to sessions.
- Stage 4: Establishing contacts with family members to gather suggestions on the 1st draft presented.
- Stage 5: Compilation of preferred means of contact for sending links: email accounts of family members, via WhatsApp.

In the first stage, the survey was applied to family members. The general results in percentage terms were as follows:

- Themes and contents: The relatives considered, in majority (90%), that all the issues mentioned in the survey should be addressed.
- Presentation of contents: For the presentation of contents, the most preferred option was the combined format: slides, video, audios (100%).
- Technological supports and skills: All family members had technological support. To a greater or lesser extent, they had management skills. Most (90%) considered it unnecessary to attend a training session.
- Preferred technological means: They indicated in 1st place WhatsApp (100%), in 2nd place video calls (90%), in 3rd place e-mails (80%) and in 4th place availability for any media (70%).
- Time and contact preferences: The morning timetable was preferred by 70% of relatives, although most indicated that they would be able to adapt to the timetable that was finally decided (90%). Regarding contacts, the majority option (100%) was that they should be established only in the session itself. Regarding the need to maintain a specific section for questions to professional staff, there was no majority choice (50%).
- Inclusion of users in sessions: Family members preferred that users not be included in the sessions (90%) or participate only in some of them (80%).
- Privacy: The majority option (100%) was for the professional team to commit to preserving it. In 2nd order they pointed out, access to sessions with personal data and passwords (70%).

In the 2nd stage, and after the evaluation of the results of the survey applied the relatives were informed of the majority options they had indicated in their responses. The main element incorporated was the choice for the online format through the ZOOM © application. Although the WhatsApp medium was chosen first by the relatives, the professional team considered that the video call format chosen second was more convenient for conducting the sessions. In the decision, the following aspects were also considered: the free character of the application, its ease of use and intuitive handling, the simple session access mechanism, its extensive social use and the institutional support obtained by the professional team for the use

of this medium. However, the application was not known to all family members, only to some. For this reason, in the 3rd stage it was incorporated into the 1st draft of the intervention format, an additional document with basic instructions for family members on how to use the ZOOM © application and requirements for accessing sessions. In the 4th stage, the families were contacted to gather their suggestions for the draft. The compilation of the preferred means of contact for the sending of links carried out in the 5th stage indicated that, the majority opted for sending links via WhatsApp, and secondly via e-mail. Given their responses to the survey, training sessions were rejected. If it was agreed that a dress rehearsal session would be held prior to the start of the program, to check the correct functioning of technological means and access to sessions.

### PHASE 3:

The Phase 3 was carried out in three stages, again pointing out that the tasks were not sequential and in practice were temporarily overlapping.

- Stage 1: Resolution of logistical difficulties and support for family members in the use of the ZOOM © application and access to sessions. It was necessary to carry out three rehearsal sessions with one of the family members, given the greater difficulty it presented in the handling of this application.
- Stage 2: Dress rehearsal of an online group session prior to the start of the program.
- Stage 3: Final review of the new intervention format and definitive drafting of the program.

In this phase, final adjustments are carried out to the new intervention format and final agreements are made with family members on the day and timetable of the sessions. Finally, the professional team proceeds to carry out:

- The final review of modules and contents of the sessions.
- The distribution of sessions by professionals.
- The definitive drafting of the program.

### Phases of the intervention implementation

The phases of the implementation process are described below.

### PHASE 4:

In this phase, the audiovisual material used in the face-to-face multifamily intervention format is selected and adapted to the new online format, and new intervention strategies and dynamics are incorporated into it. Since the beginning of the PACF, an audiovisual support has always been used for the multifamily intervention, the purpose of which is to transmit simple ideas supported by images. Each content is treated with the presentation of a slide. However, for the new online intervention format, it was necessary to update and adapt this support material. Finally, an audiovisual support made up of 242 slides was developed. The adaptation for the new online intervention format was justified for the following reasons:

**Different approach formats:** The implementation of a multifamily group in its face-to-face format is a complex task. There are various factors which justify this complexity. For example, how to select the family members who are candidates for the multi-family group, what criteria should guide the inclusion-ex-

clusion of families, the adequacy of means and supports for the development of sessions, the different objectives of modules, the different structures of sessions, the assignment of roles of the leading professionals or the conduction of the sessions themselves. All these factors also had to be taken into account for Multifamily Intervention (MFI) new online format, but this format was unprecedented for the professional team.

**Different length of sessions:** The face-to-face MFI allows for a longer duration of sessions. The synergies established in the group lead to this. In the face-to-face format, sessions usually last two hours. But for the online format, recommendations for interventions of this type indicate a shorter duration of sessions. In this regard: [5,28]. Extending the networked sessions beyond sixty minutes did not seem appropriate, nor was it recommended. Therefore, the sessions and the support material used had to be distributed in a different form, reducing the duration of the sessions, but increasing the number of them.

**Different structure of modules and sessions:** Another adaptation that had to be made related to the module and session structure itself. In the PACF, the face-to-face multifamily intervention takes place in fifteen sessions distributed in three sequenced modules, with a total duration of two years. For the online format, given its shorter duration, the MFI is developed in sixteen sessions distributed in five sequenced modules with a duration of one year.

**Different objectives and configuration of the 3rd module of the face-to-face MFI:** It was also necessary to adapt the 3rd Module of the face-to-face MFI dedicated to coping with problems. This module, which takes place in five sessions and lasts for one year, has been condensed for the new online format into two sessions. The fundamental difference with the face-to-face module is that it does not address any specific problem raised by families, nor does it follow the structure of sessions of that module: problem round, problem choice, solution strategy round, solution choice and strategy implementation. The professional team considered that, for the new intervention format, following this structure was too complex. For this reason, they opted for this formula condensed into two sessions. In the 1st session, common and habitual difficulties of family members in living with patients are pointed out, described in a generic but exemplified way. The second session offers practical suggestions for dealing with these difficulties. In order to partly fill the gap with respect to the face-to-face format, various dynamics are incorporated in both sessions: discussion among family members on what strategies they would choose to solve a specific problem, simple questions for quick answers from the whole group, group discussion following readings of contents by family members.

**Incorporating new strategies and dynamics:** New strategies and dynamics were also incorporated into the adaptation of the support material produced in this networked MFI format, which were considered in the latest revision of the PACF in 2020. As noted above, the PACF has been described in both editions of the work entitled, " Guide of Family Intervention in Schizophrenia " [1,2], and in its latest revision [3]. In this review, some strategies used by contextual therapies are incorporated into the MFI for both face-to-face and online formats. The work carried out by some of the authors of the present article [11] contributed to this, exploring the applicability of these strategies and presenting a proposal for the integration of Acceptance and Commitment Therapy (ACT) in MFI. Some of the contributions and studies reviewed were particularly useful for

the elaboration of this integration proposal. These include: [12, 14,29,15,19]. It was felt that the basic components identified by ACT (emotional acceptance, attention to the present moment, attention to the I-context, cognitive diffusion, value-directed action, commitment making) and the therapeutic strategies used in that model could be particularly useful and integrated into MFI (face-to-face or networked) without difficulty. The use of these strategies, although without the therapeutic purpose intended by the ACT model, effectively complemented, in the opinion of the professional team, the development of contents addressed.

Considering the family's preferences about the themes and contents to be addressed, an intervention program was designed, structured in 5 modules with a total of 16 sessions. Annex 2 presents the program delivered to family members. It provides the characteristics and structure of the program in terms of modules, contents of sessions, timing and frequency of sessions.

#### PHASE 5:

Criteria are established for the evaluation of the key areas to be measured and a review and selection of the evaluation instruments is carried out. It has been noted that a recurring difficulty in networked interventions for caregivers is the lack of uniformity in terms of the criteria that should guide the selection of key areas to measure as outcomes.

The systematic review by [8] notes, for example, that measures of caregiver support and social network were virtually absent in these networked interventions. The authors point out that caregivers of psychotic patients are up to ten times more socially isolated than the general population, and that it is therefore important to extend the literature on digital technology outcomes beyond simple satisfaction rates. Similarly, the experience of the professional team with groups of families contributed to the reorientation of the evaluation criteria. It was felt, for example, that simply assessing the potential impact of the intervention in reducing possible family overload was not sufficient. Family members do not experience and perceive the "burden of care" in the same way. Some caregivers may even derive secondary benefits from caregiving. This aspect, regarding the potential benefits of caring for people with SMD on their family members, has been pointed out in some studies. It is worth mentioning the contribution of [30]. For this reason, it was considered necessary to extend the assessment by incorporating a more global evaluation of the "real situation" of the careers, which would make it possible to investigate other areas such as, their psychological and physical well-being, family and couple relationship, relationship with the therapeutic team, social network and support from friends or the perceived capacity to overcome adversity and resilience. In Annex 3, are presented the evaluation instruments that were selected and their adaptation for the care setting of the CDRPS Network. After reviewing the available instruments, the following were selected:

- S-CGQoL. Schizophrenia Caregiver Quality of Life Questionnaire [31].
- CD-RISC 21. [32]. Spanish adaptation-validation of the original version CD-RISC. Connor-Davidson Resilience Scale [33].

#### PHASE 6:

Start-up. The implementation of the Multi-Family Intervention (MFI) in the CDRPS Network starts in March 2021, in one of the CDRPS with a multi-family group of 7 families. In the group a total of 10 relatives are involved. As mentioned above, the aim is to disseminate this experience throughout the CDRPS network. The methodology and main characteristics of the intervention developed are described below.

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#### Methodology

A frequency of sessions every 2-3 weeks was established, with longer breaks during holiday periods. Each session is programmed in the ZOOM © application, sending an access link to all family members one week in advance. In general, there were no difficulties in accessing sessions, except for the occasional situation where the line was down, which was rectified. A document drawn up by the professional team and given to the families on the characteristics of the ZOOM © application and the requirements for accessing sessions facilitated the use of this application. The sending of links was carried out via WhatsApp and E-mail. All sessions were recorded, with the consent of the group, and kept by the professional team for 30 days, during which time family members could request the recording. After this time, they were not considered to be kept for release to family members. The overall supervision and coordination of the new networked MFI format is carried out by the professional responsible for the CDRPS where it is implemented.

#### Structure of sessions

For the new online MFI format, the session structure follows the same line used in the face-to-face MFI. Each session is structured in five distinct phases or "moments":

- **Previous socialization:** This is an informal contact. Any theme that allows such socialization is used, the weather, the latest social events. The content of the session is never directly addressed. It is essential to always facilitate this previous socialization before starting the session.
- **Review of the previous session:** In all the sessions, except the first one, a review of the contents dealt with in the previous session is carried out. This favours the recall of the contents dealt with, or the updating of any family that could not be present in the previous session.
- **Description of objectives:** Following the review of the previous session, the specific objectives of the day's session are described.
- **Development of contents:** The central and most extensive moment temporarily, where the contents of each session are developed.
- **Final socialization:** Each session concludes as it began, with another final socialization, trying to end the session in a warm and relaxed atmosphere. And the families are announced for the next online session, reminding them of the date.

#### Development and scripting of sessions

Each session lasts approximately 60 minutes. To support the development of content, all sessions have been scripted. This script includes the distribution of slides and content to be developed by the professionals and dynamics to be carried out. The use of the script in the new online MFI format has been very useful, allowing for a more orderly presentation of the contents. As mentioned above, the audiovisual support mate-

rial consists of 242 slides. For the development of the contents presented in the slides, a set of associated dynamics was also prepared. A total of 117 dynamics with different characteristics were developed. These include Role Play, video viewing and subsequent group discussion, experiential exercises, muscle relaxation practice, mindfulness practice, discussion of coping strategies and subsequent sharing, group discussion following readings of content by family members, modelling and dramatization carried out by professional drivers. These slides and dynamics are distributed for each session among the team of conductors professionals, assigning each of them a specific role. The team profile is multidisciplinary. Each session is conducted by 2 professionals. Each session is recorded in a document prepared for this purpose. In Annex 4, the model for recording sessions is presented. As an example, the record of the 1st Session of the 2nd Module dedicated to communication and communication styles is given. In some sessions of a more general nature, users also participated. For example, in the 5th session of the 1st Module dedicated to available resources and in the 1st session of the 3rd Module dedicated to self-care. The selection of users for inclusion in sessions is carried out by the professional team on the basis of clinical criteria. Subsequently, invitations are sent to the selected users (who accept or decline to participate) and their relatives are informed. Before starting the sessions in which, the users participate, the rest of the family members are informed.

### Strategies and dynamics used

As noted, the latest revision of the PACF incorporates some of the strategies used by the ACT model into MFI for both the face-to-face and online formats. It was felt that the basic components identified by to this end, the support material included a set of videos and exercises related to the content of the sessions, which incorporated different strategies: metaphors, experiential exercises, self-care practices, mindfulness practice. These include: the harrier fable, the metaphor of the man in the hole, the metaphor of the passengers on the bus, the metaphor of the garden, the metaphor of the unwanted guest, the metaphor of the jar full of things, the experiential exercise for the construction of one's own tree of values, the one-minute meditation exercise, the practice of progressive muscle relaxation.

These strategies have been included in some works and contributions made by the ACT model. In this respect: [19,12,14,15]. In some studies, the efficacy of these strategies has been evaluated. In this respect, it is worth noting the work of [18]. This randomized controlled study evaluated the efficacy of a Mindfulness-based network intervention aimed at general support for caregivers in coping with their lives and daily living with patients. The dynamics used and the intervention of family members in these dynamics is also recorded in a document prepared for this purpose. Annex 4 provides an example of a record of the dynamics carried out in the 1st Session of the 2nd Module dedicated to communication and communication styles.

### PHASE 7:

In this last phase, the final evaluation of quality of life, resilience and final satisfaction with the intervention is carried out.

The following shows the overall averaged results of the previous and subsequent quality of life evaluation (S-CGQoL). The S-CGQoL instrument assesses 7 dimensions related to the quality of life of caregivers of people with schizophrenia: psychological and physical well-being, psychological burden-daily life, re-

lationship with partner, relationship with the therapeutic team, general relationship with the family, relationship and support of friends, material burden.

In the previous evaluation, the results were as follows:

- Dimension 1 (psychological and physical well-being) was the worst rated by relatives, with group mean scores below average.
- Dimensions: 2 (psychological burden-daily life) and 3 (relationship with partner), were the next lowest rated, although in both the average group score was slightly above average.
- Dimensions: 5 (general relationship with the family) and 6 (relationship and support of friends), were somewhat better rated by relatives, with group mean scores above the average.
- Dimensions: 4 (relationship with the therapeutic team) and 7 (material burden), were the most highly rated by relatives, with scores clearly above the average.

In the subsequent evaluation, the results were as follows:

- Dimension 1 (psychological and physical well-being) was still the worst rated by family members, with group mean scores below average.
- Dimensions 2 (psychological burden-daily life) and 3 (relationship with partner), were still the next lowest rated, although in both the group average score was slightly above average.
- Dimensions: 5 (general relationship with the family) and 6 (relationship and support of friends), were somewhat better rated, with group average scores above average.
- Dimensions 4 (relationship with the therapeutic team) and 7 (material burden), were the most highly rated by relatives, maintaining scores clearly above average.

The overall averaged results of the previous and subsequent resilience evaluation (CD-RISC 21) are given below. The CD-RISC 21 instrument assesses 4 factors related to resilience: coping skills, ability to overcome and achievement of objectives, positive appraisal of stressful situations, relationships and self-confidence.

In the previous evaluation, the results were as follows:

- In general, group mean scores for all factors were higher than average.
- This pointed out, that the relatives presented an acceptable resilience and ability to cope with adversity in the previous evaluation.
- Factors: 2 (ability to overcome and achievement of objectives) and 4 (relationships and self-confidence), were the most highly rated by relatives, with group average scores clearly above the average.

In the subsequent evaluation, the results were as follows:

In general, group mean scores were still above the average for all factors.

- Factor 1 (coping skills) did not differ with respect to the previous evaluation.

- Factor 2 (capacity for self-improvement and achievement of objectives), presented very similar results to the previous evaluation, maintaining a level clearly above the average.
- Factor 3 (positive appraisal of stressful situations) presented a slightly higher score compared to the previous evaluation.
- Factor 4 (relationships and self-confidence), presented a slightly higher score compared to the previous evaluation, maintaining a level clearly above the average.

In the opinion of the professional team, the few changes observed in quality of life and resilience between the two evaluations are determined by two main factors. The first factor is related to the impact on the group's mean score of the worst scores of two parents in the subsequent evaluation, despite the fact that the rest of the relatives of the group improved their scores in both areas. These two parents, of advanced age, have a son with highly crystallised delusional activity. They are under a high family burden, their coping strategies in the past have been unsuccessful and their educational styles have always been very permissive. In the opinion of the professional team, the quality of life and the ability of family members to cope with adversity may be weakened when energies falter due to the passage of time and when the family burden has been and continues to be high. It should also be noted that some systematic reviews of outcomes of networked caregiver interventions offer less evidence of effectiveness with respect to burden and quality of life. In this regard the cited contribution by [25]. The second factor, which is more difficult to value, is the possible impact of the pandemic situation in our country, with significant restrictions on social contact, health care (in many cases only telephone contact) and the greater time spent with users in their homes, with possible repercussions on the level of psychological burden on family members.

In order to evaluate the acceptability and final satisfaction with the intervention, a questionnaire was designed (See Annex 5). Some criteria were considered in the construction of the questionnaire. These were:

- Completion: It was felt that the questionnaire should be written in a simple form for better comprehension. A Likert-type scale was used for the response options.
- Application time: It was estimated that the application time should be short (10-15 minutes).
- Length of the questionnaire: It was considered that the questionnaire should not be too long. Finally, 13 items were selected, which asked about the relatives' satisfaction with: duration of the program, frequency of sessions and timetable, contents treated and presentation of contents, technological means used, access to sessions, level of participation, inclusion of users in some sessions, conduction of sessions by the team, support of the professional team, privacy, usefulness of the program.

The results of the evaluation of satisfaction with the new intervention format were as follows:

- Duration program: All relatives were fully or fairly satisfied with the temporary extension of the program.
- Frequency of sessions and timetable: 75% of the relatives showed quite or total satisfaction with the frequency of

sessions and timetable.

- Contents treated and presentation of contents: 100% of the family members were totally satisfied with the content developed in the new online intervention format. 100% of the family members were totally satisfied with the format chosen for the presentation of contents (slides, videos, audios).
- Technological means: 88% showed total satisfaction with the diversity of technological means used: video calls, e-mail communications, WhatsApp messages.
- Access to sessions: 75% of family members expressed full satisfaction with the ease of access to online sessions.
- Participation of family members: All family members were totally or quite satisfied with the level of participation they had in the sessions.
- Inclusion of users in sessions: 75% of the family members showed a fair or complete satisfaction with the inclusion of users in some sessions.
- Conduction of sessions: 100% of the relatives were totally satisfied with the way the professional team had conducted the sessions (presentation of contents, dynamics, exercises carried out).
- Support received: 100% of the relatives were totally satisfied with the support they had received from the professional team for resolving their difficulties and clarifying their doubts.
- Privacy: 100% of family members was fully satisfied with the way in which confidentiality had been preserved and how the privacy of each participant had been taken care of.
- Usefulness of the program: 100% of family members was completely satisfied with the new online intervention format and how useful it had been for them.

### Main results

The main results of the new online format of intervention are as follows:

- The incorporation of relatives to the process of constructing the new intervention format has allowed for the adaptation of the format to the criteria and needs identified by the relatives themselves. The incorporation of family members has favored their greater collaboration and involvement as co-authors of the new format and contributed to the acceptability and satisfaction with the subsequent intervention. All family members have remained committed until the end of the program, with no drop-outs.
- The results of the final quality of life and resilience evaluation are not conclusive. In the opinion of the professional team, the few changes observed in quality of life and resilience between the two evaluations are determined by two main factors. The first factor is related to the impact on the average group score of the poorer scores of two parents in the subsequent evaluation, despite the fact that the rest of the relatives of the group improved their scores in both areas. These two parents, of advanced age, have a son with highly crystallized delusional activity. They

are under a high family burden, their coping strategies in the past have been unsuccessful and their educational styles have always been very permissive. In the opinion of the professional team, the quality of life and the ability of family members to cope with adversity may be weakened when energies falter due to the passage of time and when the family burden has been and continues to be high.

- The results of the satisfaction evaluation indicate a high acceptability and satisfaction of family members with the online intervention format. However, this does not allow conclusions to be drawn about the effectiveness of the intervention. As pointed out by [8] it is important to expand the literature on the outcomes of online interventions with caregivers beyond simple satisfaction rates.

### Discussion

As elements for discussion, the following should be noted:

- The design of this new online family intervention format, and the incorporation of family members in the construction of the format, has been an enriching experience for both family members and the professional team. This is congruent with the idea of involving the interested parties more and more in the actions to be carried out by the Mental Health services. This format can be adapted to the possibilities and reality of healthcare in each service.
- The strategies outlined by current more comprehensive models of SMD attention (Contextual therapies, ACT) and the use of their techniques (metaphors, experiential exercises, mindfulness) can be integrated into the multi-family intervention, both in its face-to-face format and online format.
- The use of the online multifamily intervention format has been shown to be a complementary intervention strategy to face-to-face multifamily intervention, but not a substitute for it. In the authors' opinion, this should be considered by mental health services.

### Conclusions

As conclusions of the implementation of the new family intervention format, it should be noted:

- The attention and support to family members through the internet can be incorporated into the routine clinical practice of healthcare services.
- The integration into the new format of an action on the main components of the ACT model and the techniques used by this model has proved to be an appropriate strategy, but whose real impact and effectiveness should be the subject of future research.
- The carrying out of a careful selection of evaluation criteria and instruments, beyond the simple indexes of acceptability and family satisfaction with the intervention, is considered a key element.
- It is not possible to accurately determine the potential benefits and impact of the new online family intervention format on the group of participating family members.
- The high acceptability and satisfaction of relatives with the new online intervention format does not allow any conclusions to be drawn about the effectiveness of the

intervention. This will require future research studies and randomized controlled trials with control groups.

### Limitations

We must point out that our work is not a research project. The objective is to present the pilot experience carried out with the new online format of multifamily intervention. The small sample size of the selected families does not allow us to draw conclusive results. Perhaps, the future implementation of this online multifamily intervention format in all CDRPS of our setting will allow us to offer more conclusive results.

**Compliance with ethical standards:** The authors declare that there is no conflict of interest or links with sponsors. The work does not provide any personal or identifying information about the participants in the program. The approval of an ethics committee was not required for this work. The work presented is a partial modification of the original article published by the same group of authors [34].

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