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The Individualized Patient Progress System (IPPS): A decade of international collaborative networking

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Abstract

Background: The backstage of research projects is seldom presented to the general audience, in particular, how the research questions emerged, how the team interacted and how the methods and design were decided upon.

Aim: In this paper we will recount the story behind an international practice-based research network for personalizing health assessment, the joint journey of researchers and therapists from three different countries in creating the Individualized Patient-Progress System (IPPS; Sales & Alves, 2012).

Results: We first describe how the idea of the IPPS emerged; then we show how IPPS is being piloted and integrated into the clinical practice. Next, we present the views of therapists and researchers who have been part of this project.

Conclusions: We discuss some lessons learned from this 14 year collaborative research programme.

Keywords (4-6): Practice research networks; Psychotherapy outcome; Personalized assessment; Outcome monitoring; Individualised measures; IPPS.

Introduction

In 1949, Benjamin Britten wrote *Let's Make An Opera!* – a children's play with an unusual format. The opera itself is presented only in the second half. The first half shows the audience how the idea of making an opera took shape, how the script was written and re-written, followed by the rehearsals and all the hidden activity backstage. In science, as in the performing arts, what is generally presented to the public is the final product – that is, the results of the studies conducted and not the creative process from where the studies emerged. In other words, what motivated the authors and how the ideas developed as a result of members of the research team interacting with each other, tends to remain less explored.

In this paper we will use Britten's two act format to present the process behind the development of the first on-line patient-tracking system that follows a personalized assessment approach, the Individualized Patient-Progress System (IPPS; Sales & Alves, 2012). In the first part, we will provide a closer look than usual at the creative process and backstage. We will describe how the idea and the format of the IPPS emerged from a close and long lasting partnership of therapists and researchers, showing how this international practice-based research network for personalizing health assessment (referred to as the IPHA Group) took shape. The second part of this paper will present a qualitative study conducted among IPHA group members on their experiences of using the IPPS.

Our main goal is to provide a successful example of a practice-based research project, showing how collaborative networks of therapists and researchers can build up clinical tools. In addition, we also aim to show the different stages in the development of a practice research network (PRN), and the lessons learned concerning its sustainability and growth.

PART 1: Developing IPPS: a collaborative 3-phase process

Phase 1 – Idiographic research on practice (Spain, 2000-2005)

Collaborative decision-making context

In 2000, the first author (CS) began her PhD at the Faculty of Medicine, University of Seville, with a practical component at the Day Unit (DU) of the University Psychiatric Hospital Virgen Macarena. This service was distinguished and recognized as standard-setting in handling severe and chronic psychiatric patients with a high rate of success, emphasising psychological treatments, with less than typical use of pharmacology. There was also an internationally-renowned training unit in family therapy, led by four full-time specialist psychiatrists with vast experience in this modality of treatment.

It was in this DU that the idea of developing a PhD based in practice emerged, so that one could learn from the clinical experience of those therapists and the know-how of the service as a whole. Being part of the clinical team, with total access to the treatment sessions, and collaboration with the therapists made, it was easier to carry out research. The entire team shared a common curiosity: What happens during family therapy

sessions that promote such radical changes in people's lives? It was this curiosity that ended up shaping the PhD project itself, which began to focus on the understanding of the change process of patients receiving treatment at the DU.

The specific research questions investigated in Sales' PhD studies, as well as decisions about theoretical framework and methodological options, emerged from a constant dialogue and partnership between Sales and the DU clinical team. Sales searched the literature for possible approaches to study the process of change and for instruments to measure such changes. The results of this literature search were then discussed with the therapists, who were invited to give their feedback about the instruments and also to do trial applications of the proposed protocols. The purpose of this collaboration was to let therapists choose which measures were more relevant and interesting for their practice, comfortable for patients, and feasible in their routine clinical practice.

On the basis of this trial phase, in which therapists tested several instruments, their interest focused on patient-generated measures, in which patients had the opportunity to express their point of view. These included individualized outcome measures, on which patients could identify problems or goals to achieve in therapy, and then use these measures to evaluate change. The therapists then piloted several patient-generated tools with their patients, testing their feasibility and clinical interest.

Besides taking part in the decision-making process regarding the instruments, the research design was also defined in collaboration with the therapists, to ensure that the service requirements and needs were met. As an example, the most appropriate moment in the service protocol for collecting pre-treatment data was reviewed and agreed with the therapists, so it would not hinder the routine functioning of the service.

Resulting research project

The result was a project in which both researchers and therapists contributed and thus were curious and motivated to get the research started. The change process research paradigm (Elliott, 2010) was chosen as the framework for understanding the clinical cases receiving treatment at the DU. The main objective was to follow a discovery-oriented research (McLeod, 1999), based on the observation of clinical cases and collecting data that would help understand the change process by linking significant events that took place in sessions to post-therapy outcomes. The research design involved: (1) Naturalistic observation of family therapy cases, led by senior family therapists; (2) session-by-session monitoring of the clinical progress using an individualized outcome measure (the Personal Questionnaire [PQ]; Elliott, Mack & Shapiro, 1999; Spanish version adapted for severe psychiatric populations by Sales, 2005), whose items are elicited from the patient; (3) asking each family member about the significant events of each session (Helpful Aspects of Therapy [HAT] Form; Elliott, 1993; Llewelyn, 1988; Spanish version adapted by Sales, 2005); and (4) at follow-up, asking each family member for the retrospective identification of changes (Client Change Interview; Elliott, 2001; Spanish version adapted by Sales, 2005) (For more details about the evaluation protocol, see Sales, 2005). A more detailed description about these particular instruments will be provided later.

Implementing protocols in practice

Being a university-based service with clinical trainees, the *modus operandi* of the service included routine meetings prior to each family therapy session, for clinical case preparation, and after the session, to discuss the family's progress and session-related events. As the research team (now comprised of CS and two research assistants)

participated in these meetings, the data collected for the research project became progressively integrated into the clinical discussions. For instance, to prepare the sessions, therapists would use the PQ ratings provided by each family member in the waiting room upon arrival to the service. Then, at the end of the session, the team gathered again and the HAT forms (filled in by each family member immediately after the session) were read and discussed. In fact, therapists were curious to learn about the immediate impact of their interventions and the discrepancies/similarities among family members.

These procedures, which emerged naturally from the dynamics of our service routine, gave rise to a systematic feedback on the treatment progress from the perspective of each family member. Aware of the advantages of this interaction/information sharing between observers (i.e., the researchers) and the phenomenon observed (i.e., the therapeutic process), we began to move away from a positivist paradigm that relies on controlling confounding variables. It was impossible, as researchers, not to influence the phenomenon we were studying. Thus, we decided to assume a pragmatic constructivist approach: Given that it is impossible not to influence treatment, let us try to influence it in the best possible way; let us provide therapists with information that they can use for the benefit of patients.

Within this new perspective, our evaluation protocol was serving both research and practice, and the dichotomy between these two worlds became obsolete. We called this a *researched-practice* approach (Sales, Fragoeiro, Noronha, & Ortega Beviá, 2002).

In sum, during this period, there were four major achievements:

- 1) We developed a new way of conducting research, in which the research questions and methods are decided not by researchers alone, but rather by mixed teams of researchers and therapists that consider the concerns and knowledge derived from practice. We later learned the concept of *practice-based research*, a UK-based bottom-up approach similar to ours, which integrated “both individual clinical expertise and service-level parameters with the best available evidence drawn from rigorous research activity carried out in routine clinical settings” (Barkham & Margison, 2007).
- 2) We identified and implemented a set of patient-generated measures, whose contents are elicited by patients, providing therapists with information the patient sees as relevant to understand their clinical condition, changes and experiences over the course of the treatment. Measures of this kind allow a personalized monitoring of patients – that is, based not on general dimensions covered by standardised measures, but on patient-specific problems instead. (Sales & Alves, 2012).
- 3) Another element was a “preliminary pen-and-paper” progress feedback system (Sales, 2005; Sales, Fragoeiro, Noronha, & Ortega Beviá, 2002), which therapists could use to improve treatment. Interestingly enough, we later learned that, by this time, other teams were beginning to develop their own feedback systems, although exclusively based on standardized measures (e.g., Lambert, Hansen, & Finch, 2001).
- 4) Other methodological advancements to analyze data included the development of a similarity measure for comparing family members’ PQs to each other (Sales & Wakker, 2009), and the adaptation of the Hermeneutic Single-Case Efficacy Design

(Elliott, 2002) to family therapy (e.g., Carvalho, Faustino, Nascimento, & Sales, 2008).

Out of these achievements, new questions emerged: Could therapists use idiographic measures on a routine basis? Could idiographic data be used for outcome assessment? Could patient-generated measures tools be combined with standardized measures? If so, would they provide complementary or overlapping information? These were some of the thoughts which were in our mind and that prompted us to continue further.

Phase 2 – Routine idiographic-nomothetic researched-practice (Portugal, 2005-2008)

Development

In 2005, the protocol developed at the Psychiatric Day Care Unit in Seville was adopted as a routine procedure in CIAF, a university-based Family Therapy Service in Lisbon, Portugal. Patient-generated outcome measures formed a key part of this protocol. However, we also realized that their uniqueness could hamper comparison between patients, and that there could be advantages in taking standardized outcome information on board.

Not surprisingly, given that our work was embedded in a practice-based research philosophy, our interests led us to the Clinical Outcome Routine Evaluation – Outcome Measure (CORE-OM; Evans et al., 2000, 2002), a standardized instrument that had been developed by UK mental health professionals. As had been the case in Spain, therapists at CIAF were actively involved in the CORE-OM selection procedure: they were asked to express their opinion about the instrument, and also encouraged to pilot it with their patients. Therapists found it relevant and complimentary to PQ, and thus CORE-OM became the second outcome measure in the evaluation protocol.

As before, the administration of the instruments was adapted to the possibilities and rules of the service. For instance, in Seville the generation of the PQ items had to be done in an hour-long interview immediately before the first family therapy session. However at CIAF it seemed better to include the PQ construction interview as part of the intake procedure of the clinic. Thus it was administered in a first appointment, with family therapy sessions starting at a later time.

Furthermore, as the “researched-practice” procedures were being implemented, new aspects were acknowledged by the team. For instance, we noted that during the interview for generating PQ items, patients tended to disclose clinically informative data. Moreover, as we were in a family therapy context, we realized that by contrasting the separate narratives of each family member, it was possible to arrive at a global overview about the similarities and differences in their viewpoints, which was extremely helpful for establishing a systemic diagnosis. In line with this, it was decided to write a report of the PQ interview, which became a source of data used by therapists for routine case preparation. In other words, a research tool (PQ) became a clinical tool to assist therapists, following a researched-practice approach.

Another innovation at CIAF was the creation of PQ evolution maps for each patient, containing PQ session-by-session scores. These maps were used to facilitate the monitoring of the patients progress over the course of treatment. Additionally, the narratives concerning helpful and hindering events of sessions reported in the HAT started to be organized in tables, and integrated in case preparation and supervision meetings.

Problem Solving

At this point, some difficulties were felt within our team. First, evaluating patients on a session-to-session basis resulted in an enormous amount of paper forms, which hindered data analysis. Also, we noticed some therapists had low adherence to the protocol, particularly when it came to maintaining a session-to-session routine data collection. By discussing this with the therapists, we found their difficulties to be of practical and administrative nature, such as: lack of time immediately after the session or between appointments, limited number of blank copies available, forgetfulness, etc. Unlike in Seville, at CIAF there was neither a formal research project, nor a team responsible for collecting, analysing and preparing data for clinical team discussions. On the contrary, at CIAF, the protocol was being implemented by therapists themselves. With this experience, we understood the importance of having at least one research assistant to support the clinical team, as well as simplifying data handling as much as possible.

In sum, by 2008, it was clear for us that:

1. Therapists found PQ and HAT to be appropriate measures to use in various clinical tasks (e.g., clinical decision making) and were open to using them in their practice (Sales et al., 2007a).
2. It was important to integrate idiographic with nomothetic data that could combine the benefits of considering case specific and standardized data.
3. It was clinically relevant and advantageous to collect information on every session and feed it back to the therapist.

Thus, we needed a tool, ideally electronic, to facilitate this work.

Phase 3 – Individualized patient-progress system, IPPS (from 2009-2012)

With the support of a research grant by the Portuguese National Foundation for Science and Technology (FCT; Ref. PTDC/PSI-PCL/098952/2008) we could finally start working towards the development of the Individualized Patient-Progress System (IPPS). This was the first patient progress tracking software integrating patient generated measures together with standardized tools and applicable for individuals, groups and families (Sales & Alves, 2012).

The CORE-OM had already been computerized in a software platform designated as CORE-Net (<http://www.coreims.co.uk/>). The CORE system was a popular system in the UK, widely used in psychological therapy services since 2001 (e.g., Gray & Mellor-Clark, 2007). We therefore teamed up with CORE Information Management Systems (CORE-IMS), and CORE-Net became the technological starting point of IPPS, serving as the basis for creating a personalized monitoring module. Its characteristics are described elsewhere (Sales & Alves, 2012). The experiences of the therapists involved in piloting the IPPS is the subject of the second part of this paper.

PART 2: Piloting IPPS: The experiences of therapists with the system

The IPPS functionalities have been informed by the researched-practice of the previous phases of the work. As it has from the beginning, our work has been grounded in clinical practice, with close collaboration with therapists. To continue involving therapists in the development of the IPPS, their perspective about the software was taken into consideration. Using a snowball strategy, we invited fellow clinical services and practitioners of the Personalizing Health Assessment Group in Portugal to pilot the IPPS and to use the instruments included in it. These included therapists from various mental health services in Portugal, as well as university counselling services, general

hospitals and private practice, which provided treatment in many formats (individual, family and group therapy) and modalities (e.g., psychodynamic, systemic, CBT, psychodrama). Some of these therapists were conducting research as part of their PhD studies. An online network was created so that IPPS users could discuss topics of common interest, make announcements (e.g., psychotherapy research events), and share files (<http://psychotherapyresearchpt.groupsite.com/main/summary>).

The pilot version of IPPS was launched in May 2011. The IPHA Group using IPPS was invited to take part in a small preliminary survey about their experiences with the system. This survey aimed to:

1. Gather information about how IPPS was integrated in therapists' practices
2. Explore the helpful and hindering aspects of IPPS, from the therapist's perspective
3. Inform the subsequent development and improvement of IPPS, and
4. Reflect on the impact of IPPS in psychological therapy services, as well as drawing on lessons learned from these early experiences with the system

We briefly present the methods and the results of this survey.

Method

Participants

In September of 2011, there was a group of eight therapists with active IPPS accounts, eligible to participate in the survey. Of these, one was excluded because they had not yet started to pilot the system. The survey was sent to seven therapists, of whom six responded to the survey.

The respondents were all female, ranging in age from 25 to 47 ($\bar{M} = 34$; $SD = 8.46$) years old, working in five different psychological therapy services in Portugal, providing various modalities of treatment, from individual to group and multi-family group therapy (see Table 1). Among the respondents, 3 therapists were using IPPS as part of their PhD projects.

[Table 1]

Measures

CORE Outcome Measure (CORE-OM; Evans et al., 2000, 2002; Sales et al., 2012 for Portuguese version) is a standardized measure with 34 self-report items. It comprises four dimensions: subjective wellbeing, problems/symptoms, life functioning, and risk/harm. CORE-OM items are rated on a 5-point scale from "not at all" to "most or all of the time", based on how patients felt during the previous week. A brief version of CORE-OM, the CORE-5, is also included in IPPS, and comprises 5 of the 34 items from the CORE-OM (see Barkham et al., 2010).

Personal Questionnaire (PQ; Elliott, Mack & Shapiro, 1999; in Portuguese, Sales et al., 2007b) is an individualized target complaint measure, generated by the patient in a semi-structured interview. In this interview (normally at treatment intake or screening) patients are encouraged to identify the problems that they wish to work on in therapy. The problems are then organized into a rank-order list of items (PQ form) and rated on a 1-7 scale, based on how much those problems have bothered the patient.

Helpful Aspects of Therapy Form (HAT; Elliott, 1993; Llewelyn, 1988; in Portuguese, Sales et al., 2007b) is a self-report instrument with open-ended questions for patients to describe the most helpful and hindering events in each session. Additionally, patients are also asked to quantify the helpfulness of each event (how hindering/helpful the event was).

Procedure

The online qualitative survey (prepared and administered using www.qualtrics.com) was sent by e-mail to all IPPS pilot users (N = 7). Data were collected for a period of two weeks (16th – 30th September, 2011), approximately four months after the system was made available. To ensure confidentiality, no personal data (e.g., name, telephone number) of therapists was requested.

The survey covered the following aspects: characteristics of the therapist/researcher/service (age, sex, professional category, professional experience, type of service, previous experience with feedback systems), experience with IPPS (helpful/hindering aspects of the IPPS), and overall opinion about future IPPS developments (desired features, future recommendations). Data collected in this survey were transferred to an MS Excel spreadsheet and content analysis was performed on all open-ended questions.

Results

Four months after launching the IPPS pilot, three participants were using the system with two goals: a) to evaluate the outcomes, and b) to study change processes in psychotherapy. The other three therapists were using IPPS in their routine clinical practice aiming: a) to evaluate psychotherapy processes, b) to measure and monitor patients' progress, c) to obtain patients' individual clinical profile, and d) to register clinical information.

Overall, therapists considered IPPS as a “pleasant” and “positive experience” (Therapists 1, 3, and 4). Therapist 2 found IPPS “very easy” to use, not only at treatment intake and during therapy, but also in data entry, visualization of outputs, and highlighting situations that represent patients' distress or harm. The other therapists in the sample considered IPPS to be a useful tool to “organize data and provide summaries of the preliminary results” (Therapist 5) and to “understand the interaction between the psychological distress of different family members” (Therapist 6).

When asked to report specific helpful aspects of IPPS, therapists referred to the provision of progress charts, monitoring the patient's clinical progress, and guiding the therapist's performance. On the hindering side, therapists considered IPPS to be time-consuming and to provide difficult information to interpret (e.g., clinical significant change values). See Table 2 for full responses of therapists.

[Table 2]

Regarding the features of IPPS which should be included or changed in the future, therapists mentioned: (a) further functionalities in data input and outputs – for example, “To have access to a chart with the PQ profile for groups (Therapist 3) and “I would include the option drop-out” (Therapist 1); (b) navigation improvements – for example, “To allow a better navigation whilst entering and correcting data” (Therapist 6); (c) further information and user-instructions – for example, “Regarding clinical and statistical changes, I would include more information to better understand what is meant by these concepts” (Therapist 2); and (d) “the IPPS layout” (Therapist 4). Therapist 5 made no suggestions.

Finally, when asked to recommend IPPS for future users, the 6 participants claimed IPPS to be useful for clinicians, patients, researchers, and also psychology services. In other words, for “colleagues who wish to monitor their practice and improve their performance” (Therapist 3) and “those who wish to have a quick picture of patients’ psychological distress and their familiar members” (Therapist 6). See Table 3 for full responses of therapists.

[Table 3]

Discussion

In this paper we have presented the background work of the IPHA Group that led to the development of IPPS and how this tool emerged from a close and long lasting partnership of therapists and researchers. The second part of this paper presented the results of a qualitative survey conducted among therapists who have been piloting IPPS in their practice and/or research projects. We aimed to explore their overall experiences of using the IPPS, its helpful and hindering aspects as a feedback system, and recommendations for future improvements. Ultimately, our goal was to provide an example of a successful practice-based research project, showing how clinical tools may be built up by collaborative networks of therapists and researchers.

Learning from and moving beyond IPPS

Overall, the results show that IPPS is perceived by therapists as a useful clinical tool. It offers advantages similar to those referred to by the therapists in Seville and Lisbon, from using an earlier, more informal pen-and-paper format. These advantages refer mainly to supporting clinical decision making, or (re)structuring areas that need to be addressed in therapy (Sales et al., 2007a). Being a computerized tool, IPPS facilitates these tasks mainly by enhancing data handling and visualization of the patient’s progress.

Despite its advantages, IPPS continues to be considered time-consuming and difficult for some therapists, particularly at the pre-treatment stage. Sales et al. (2007a) had found the same result. We had hypothesized that this experience could have occurred due to the fact that, after 4 months, participants were still unfamiliar with the system. However, some of the therapists who took part in this pilot recently reported that even after a year of routine use they still see the IPPS as time-consuming (Lucas et al., 2012).

Despite its drawbacks, it was encouraging to learn that therapists remain enthusiastic about IPPS and its instruments after one year of use. For instance, CORE-OM data (in particular, its short version, CORE-5, also available in IPPS) is regarded as an “easy and quick way to monitor a client’s symptomatology across the therapeutic process”. The PQ suggests “a picture of patient’s perception of their problems and suffering associated with them”, while the HAT provides “clues about what needs to be worked or improved in the next session”, as well as “what is important” for patients (Lucas et al. 2012).

The similarities between the pen-and-paper and computerized version of this individualized progress system, made us realize that our PRN collaboration has resulted in more than a web-based tool. In fact, we consolidated a new way of conducting treatment that uses on-going feedback of the patient’s perspective. This is a new researched-practice methodology that we call Individualized Patient Progress Methodology (IPPM): A researched-practice where the therapist has access to the patient’s feelings and thoughts about the treatment, about how the patient sees their own

process of change and their therapeutic progress based on aspects that are unique to each case.

This way of conducting therapy can be achieved by means other than IPPS. For instance, it can rely on other patient-generated measures besides PQ or HAT, such as Psychlops (Ashworth et al., 2004), another patient-generated outcome measure, or the Important Events Questionnaire (Cummings et al., 1992), a process measure for patients to identify important events in sessions (see Sales & Alves, submitted, for a review on the existing patient-generated measures).

IPPM can also rely on simple pen-and-paper procedures without involving software systems, as it happened in phases 1 and 2 of our network. In fact, contact with therapists has shown that each professional tends to develop their own researched-practice procedures, according to their professional needs, the clinical population served, the characteristics and constraints of the service, and their personal preferences.

On the whole, the IPHA Group and IPPS grew hand in hand and mutually influenced each other. As such, we believe that creating IPPS in an international network context has facilitated its development and enhanced its potentialities as a clinical tool. One way to achieve this has been to run periodical surveys about the IPPS users' experiences, as illustrated in this paper. Besides keeping therapists motivated about the research, these surveys give therapists a voice to express their concerns with the system and the protocol as a whole, such as their difficulties understanding concepts like clinical change. Learning about these concerns makes it possible to improve IPPS, as well as its manual and training sessions. Also, by sharing their experiences with one another, therapists have the opportunity to discuss alternative strategies to implement the system in their practice. For instance, to make the pre-treatment evaluation less time-consuming and difficult for patients, one service often opts for postponing CORE-OM to immediately before the first session, and not at the screening session as usual. In other words, at this network, therapists are encouraged not only to adapt the protocol to their needs, but also to seek, conjointly, solutions to overcome potential difficulties in implementing the system.

Our network is currently focused on the validation of the IPPM for routine outcome management, and as a reliable data source for outcome assessment. Several projects explore the psychometric characteristics, acceptability and feasibility of PGOM in drug and alcohol dependence (Alves, Sales & Ashworth, 2013) and mental health settings (e.g. Project "Personalized outcome measurement in hospital-based psychological treatments"), including exploratory studies that focus on how PGOM may impact on the therapeutic alliance between patients and therapists. IPHA members have been adapting and testing PSYCHLOPS in Portuguese primary care and residential mental health (Pereira & Romão de Sousa, 2014), and have established the psychometric properties of PQ in an internacional multi-sample study (Elliott et al., submitted).

In retrospective, we believe that some aspects have played an important role in the success of this 14-year collaboration, which we would suggest as the take-home messages for implementing and managing long lasting PBRNs (see Table 4).

In sum, every effort should be made to strengthen the linkages between researchers and practitioners so that everyone receives something in return for their involvement in research.

[Table 4]

Limitations

Finally, this report has several limitations which must be mentioned. First, we must bear in mind the limited number of therapists who have expressed their views about IPPS. However, the group of IPPS users continues to grow and there are future plans to survey current participants about their experiences with the system. Also, the survey reported here focused solely on qualitative information, which hindered the comparison between therapists in terms of how they perceived IPPS. Future surveys should also include quantitative rating scales of, for example, utility.

Most importantly, however, it is worth noting that therapists who took part in our PBRN, in general, and piloted IPPS, in particular, did so on a voluntary basis. This might have biased their favourable opinion towards this research project and their openness to integrating it in their practice. Therefore, it is necessary that future studies include therapists less motivated to use IPPS, or to participate in PBRNs, before generalizing results.

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Table 1: Characteristics of IPPS pilot users (N=6)

	Type of service	Professional occupation	Type of therapy	Professional experience	Experience with IPPS (length)	Previous experience with feedback systems (excluding IPPS)
Therapist 1	Department of Psychiatry / General hospital	Therapist and researcher	Group therapy	6-10 years	3 months	No
Therapist 2	Psychiatric Day Hospital / General hospital	Therapist	Multi-family group therapy	> 15 years	4 months	Yes
Therapist 3	University Counselling Service	Therapist	Individual therapy	1-5 years	4 months	No
Therapist 4	University Counselling Service	Therapist	Individual therapy	1-5 years	4 months	No
Therapist 5	University Counselling Service	Therapist and researcher	Individual Therapy	11-15 years	3 months	No
Therapist 6	Private practice	Therapist and researcher	Group therapy	6-10 years	3 months	No

Table 2: Helpful and hindering aspects of IPPS (N = 6)

	Positive / helpful aspects	Negative / hindering aspects
Therapist 1	Easy to use; it allows the monitoring of therapeutic progress throughout the sessions; the possibility of providing patients with feedback; useful graphs that help visualizing changes; the possibility to monitor individual or group therapy.	It doesn't allow the transfer of data to other programs yet, such as Excel or SPSS.
Therapist 2	The IPPS has been very useful to support clinical decision making, allowing the monitoring of patients' progress throughout the therapeutic process, as well as continuously (re)structuring the areas that need to be addressed / are hindering treatment; on the IPPS' important features, there is the summary chart, its intuitive way of results display, allowing feedback to patients, and also the clinical alert flags which are presented to therapists.	The IPPS and its instruments (CORE-OM, CORE-5, PHQ, PQ and HAT) are sometimes lengthy and difficult for patients in the pre-treatment evaluation.
Therapist 3	Easy to use; the possibility to obtain a profile of patients' progress, which stimulates a self-reflection about our performance, as therapists, and guides our interventions; it provides objective and visible data, in summary charts, to demonstrate patients' progress; with IPPS data it is easy to "confront" patients with their own progress and drawbacks during therapy, and conjointly discuss its meanings; the IPPS is a good feedback system, for both patients and therapists; the IPPS helps raising patients' awareness about their progress, as well as helping them to re-think about themselves and their problems; it provides information about the treatment's success; in case of undesirable results, the IPPS provides alert flags and enhances the carefulness which we must have in our daily practice; the IPPS makes us re-evaluate and think about the cases in a different perspective, reinforcing our performance as therapists; when we notice positive results, the IPPS empirically-driven data can be used to support such outcomes and helps us clarifying our perception about the case.	It is difficult to understand the difference between "clinical change" and "statistical change"; sometimes they appear to be the same thing, however, the outcomes are dissimilar; there is little information about how to interpret the scatter plot.
Therapist 4	It organizes and stores information, providing an updated patient profile.	To date, there are none.
Therapist 5	IPPS organizes data collected with patients, with the advantage of analysing, automatically, the information which is inserted in the system; the IPPS also allows the management of sessions itself, evaluating the therapeutic process in an ongoing fashion.	It is necessary to ease the data input procedure, as well as to have direct access to certain fields of the IPPS, which would make the system more practical; the impossibility to add other instruments to the system.
Therapist 6	It provides a quick analysis of psychological change processes occurring in different family members, both at the beginning and ending of treatment.	It is difficult to enter data because it doesn't let us go back directly, which is important in case of error or unknown information.

Table 3: Overall experience with IPPS and level of recommendation to future users

	To whom would you recommend the IPPS?
Therapist 1	I would recommend it to therapists and researchers.
Therapist 2	I believe IPPS is fundamental in the clinical practice of any psychologist, in any context, so I think this is a useful tool for patients and therapists in the course of treatment.
Therapist 3	To colleagues who wish to monitor their practice and improve their performance, and also to services that offer psychological treatments and are looking for an empirically-validated evaluation system; this system provides a good perception of patients' clinical evolution.
Therapist 4	To therapists, so they can monitor patients' progress and self-evaluate their performance; also to researchers.
Therapist 5	To therapists and researchers.
Therapist 6	To those who wish to have a quick picture of patients' psychological distress and their family members, from the beginning until the end of the therapeutic process; also to professionals who wish to investigate the relationship between psychological complaints, therapy goals and the extent to which they were achieved, based on final outcomes of psychotherapy processes.

Table 4: Ingredients for successful PBRN – key messages

Ingredients for successful PBRNs	
Key messages	Objective
Develop a relationship of trust and mutual respect between researchers and therapists	To promote a context where everyone feels they are contributing to the research project and having their role acknowledged by other colleagues
Be open-minded in setting the purposes of the research, in order to address topics of interest to all parties, in particular therapists' curiosities	To keep therapists motivated for research and also makes use of their clinical expertise
Promote flexible research designs, discussing the rationales behind various methodological options with therapists and looking for potential solutions together	To ensure the methods are feasible, relevant for practice and meet the constraints and structure of the service
Clearly establish, in advance and in mutual agreement, which outputs are going to emerge from the collaboration, such as publications, communications	To guarantee that all parties involved are given something in return for their contribution