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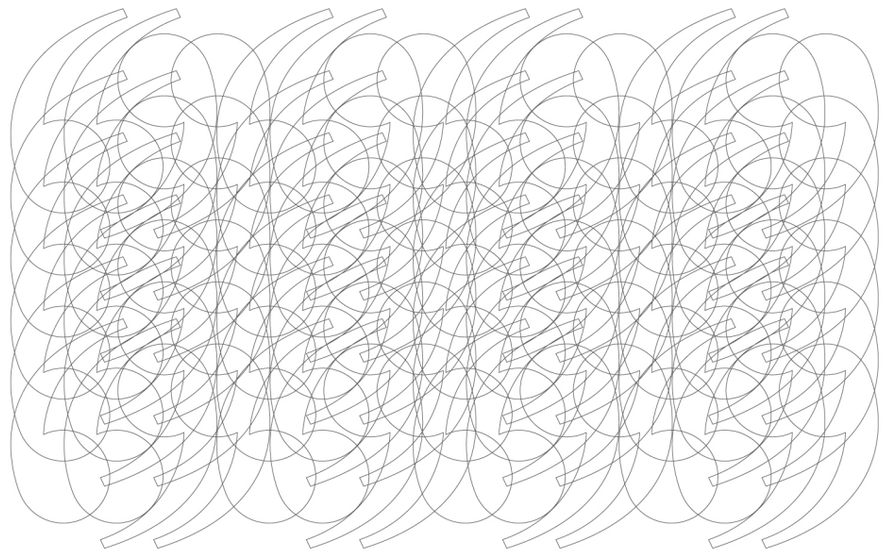
TESIS DOCTORAL

EL ANÁLISIS DEL LENGUAJE EN PSICOTERAPIA: DIFERENCIAS ENTRE EXPERTOS Y NOVATOS

LANGUAGE ANALYSIS IN PSYCHOTHERAPY: DIFFERENCES BETWEEN EXPERTS AND NOVICES



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El análisis del lenguaje en psicoterapia: diferencias entre expertos y novatos

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Language Analysis in Psychotherapy: Differences between Experts and Novices

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Realizada bajo la tutorización de MARÍA ROSA ESTÉVE ZARAZAGA y dirección de ALBERTO RODRÍGUEZ MOREJÓN (si tuviera varios directores deberá hacer constar el nombre de todos)

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HACE CONSTAR

Que el trabajo de investigación realizado por el doctorando Don Alberto Zamanillo Díaz, titulado "El análisis del lenguaje en psicoterapia: diferencias entre expertos y novatos" ha sido realizada bajo mi dirección y que cumple los requisitos científicos establecidos en la legislación vigente, por lo que autorizo su presentación en el Departamento de Personalidad, Evaluación y Tratamiento Psicológico para su posterior defensa con el objetivo de optar al grado de Doctor.

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Profesor Titular del Departamento de Personalidad, Evaluación y Tratamiento Psicológico. Universidad de Málaga

Acknowlegment (Spanish)

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in memoriam José Zamanillo Pérez, mi padre.

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Abstract

Meta-analyses and studies in naturalistic settings indicate that **psychotherapy** is **effective** in helping people (McAleavey et al., 2019; Smith & Glass, 1977; Wampold, 2001). When **comparing models** to determine those better equipped to help people, results indicate that **differences** between the various orientations are **small** or **practically non-existent** (Marcus, O'Connell, Norris, & Sawaqdeh, 2014; Wampold et al., 2017).

If psychotherapy is effective and no differences are found between the different models, one explanation is that their effectiveness is related to aspects shared by all therapeutic models.

The study conducted by Wampold (2001) concluded that 87% of the variance of change obtained in psychotherapy was due to extra-therapeutic factors, which include the client and his or her characteristics. According to these results, only 13% of the variance of change could be explained by the therapy. Duncan (2010, pp. 20-27) broke that 13% down into three variables: the therapist would explain approximately between 5% and 7%, the therapeutic relationship between 6% and 9% and lastly, the specific techniques and models approximately 1% of the variance in results.

The Theory of Common Factors, however, also has aspects **worthy of criticism**. These **factors** are still too **abstract** and complex to measure and, above all, to relate to each other. According to the results mentioned above, the proposed percentages of change variance are always ranges, and tend not to add up to a full percentage. This is because many elements of the common factor models **overlap** (e.g. it is not easy to understand the techniques without the therapist, just as it is difficult to understand the therapeutic relationship without the client). Although it is theoretically suggested that the elements are interconnected, complex constructs such as "therapeutic relationship" or "technique" make it difficult to perform statistical analyses that take into account the high interconnection and interdependence of the various factors.

The **second criticism** to the theory raised here is its tendency to offer an answer to the question "**which elements are related to good results**?", while leaving the question "**how do these elements develop in therapy**?" unanswered (Kazdin, 2007). This criticism suggests that, because there is insufficient evidence on the mechanisms of change that produce an improvement in clients, the various models could be obtaining similar results from different procedures (Doss, 2006). In fact, **no common or specific factor** has yet been studied in such a way that could allow us to grasp the **causal mechanism that leads to improvements** (Cuijpers, Reijnders, & Huibers, 2019).

Research in psychotherapy must therefore find new paradigms that facilitate the study of both specific and common factors and recognize the high interactivity and immediacy of therapy. Some authors suggest that **innovative designs** should be used to overcome these limitations (Gaab et al., 2018), such as the **convergence**

of evidence (or triangulation of evidence) through small experiments developed to understand the same phenomenon through different designs (Carey & Stiles, 2016, p. 90; Munafò & Smith, 2018).

For all these reasons, and **in response to the criticisms outlined above**, this doctoral thesis suggests the **study of language** as a methodological **solution**, justified as follows:

1. **Language** is the "**what** is done" and the means (**how** it is done) for all **common and differentiating elements** that occur in psychotherapy: the techniques are performed during the interview, as proposed by the therapist; the study of language allows us to investigate the therapist-client interaction, and the (therapeutic) relationship that is generated through this linguistic exchange.

2. **Language** is a common element to all psychotherapies, necessary and sometimes sufficient to obtain improvements through psychotherapy. This second reason implies a notion more closely related to constructionism, where language and dialogue allow therapist and client to negotiate a new meaning for the problem and plan a course of action for its resolution (Fourie, 2012; Van Zyl, 2018).

3. **Language** is an **observable** phenomenon that **allows for studies** focused on the **therapist**, the **client** or their **interaction**. Despite possible refinements and improvements in the analysis or instruments used, thanks to the evolution of technology and psychological science, the sample (dialogue) remains unchanged over time (i.e. raw data). On the other hand, the use of more abstract constructs and the instruments generated for their study may be useless in the future, if it is found that such constructs are not relevant, or are discarded in psychological research. In this regard, the *replicability crisis* affecting psychological science has demonstrated a lack of empirical evidence in many constructs (Klein et al., 2018; Munafò et al., 2017). It should be noted that this proposal does not intend to call into question psychological constructs based on established evidence; rather, it proposes that the analysis of these clinical constructs must be linked to the psychotherapeutic interaction. The dialogue that takes place in therapy is where the *myth*, as put

forward in Frank and Frank (1991), is created and adapted to each client.

If this proposal on language were valid, studying it would facilitate a better understanding of: a) how expectations, resilience and, ultimately, the change in the client materialize in therapy session; b) how the therapeutic relationship evolves throughout the treatment; and c) **what aspects or characteristics of therapists are causing some professionals to do better than others**.

Certain phenomena of face-to-face dialogue may be present in psychotherapy. Therefore, understanding how we use language daily can provide us with explanations regarding how therapy works.

One of the basic processes that occur in everyday speech and in therapy is the use of formulations. have the function of explicitly showing agreement during a dialogue. They function as a "sociological glue", a way of telling the interlocutor "so, what you are saying is this..." (Peräkylä et al., 2010). Therefore, formulations always refer to previous aspects of the conversation. Similarly, whenever psychotherapists make summaries, validations

and empathic comments, or use specific techniques such as reframes, redefinitions and even interpretations, this is done through a process of formulating what the client previously said.

Another fundamental aspect of language in everyday life and therapy are presuppositions. They express that people take for granted certain information without the constant need to verify whether they are true or not, therefore understanding that they handle the same prior information (Stalnaker, 2002, p. 701). These are an essential part to understand how questions work. Presuppositions in questions: a) constrain and guide toward a particular aspect of the respondent's experience; b) tend to be implicit in the question and are accepted in the answer; and c) it is the person who answers who gives meaning to the question, instantly reviewing what was asked (McGee, 1999). During therapeutic meetings, professionals can thus take advantage of questions and the assumptions they make, to make clients reflect on aspects they had not previously assumed.

Until now, all elements explained (formulations, presuppositions and questions) reflect the high interactivity and mutual influence between participants.

Formulations only appear when two people exchange, adapt and modify information. Questions, on the other hand, make no sense without the answers, and presupposing somewhat implies the ability to predict what information the other person has and what knowledge we should share. However, all this does not yet explain how two people come to understand each other and generate shared knowledge.

The collaborative model for dialogue suggests that participants collaborate in small sequences, moment by moment, gradually creating shared knowledge and making sure that what is said is also understood. All this is defined as grounding. Therefore, the model emphasizes the interactional aspect: two people come to understand each other thanks to what they both do during the dialogue (e.g. formulations, questions). Interaction generates knowledge; it is more than a mere exchange of information from participant A to participant B. Bavelas, Gerwing and Healing (2017)found in experimental settings a similar process which authors called calibration. This process consists in a quick sequence (on average five seconds long) made up of three steps: interlocutor 1 raises new information, interlocutor 2 indicates he/she has understood (nodding, showing surprise, smiling, with interjections, formulating what the first said, etc.) and finally, interlocutor 1 confirms that he/she is being understood (continuing with new information, explicitly saying it, nodding, etc.).

It can be concluded that dialogue occurring in therapy is **collaborative**, as Clark proposes (1996). After all, according to his theoretical proposal, a psychotherapeutic treatment would also be considered a joint action, since language is the central element and the two parties (therapist and client) coordinate their actions with a specific purpose, in this case, the client's wellbeing. Thus, the information gradually accumulating throughout the therapeutic conversation is what would bring about a new understanding in the client of his/her problem and its resolution. We can also assume that the new and helpful (therapeutic) information will be calibrated as proposed by Bavelas et al. (2017). There is therefore no passive party in a dialogue, since all participants are active in the development of discourse and the construction of meanings or new knowledge (Bavelas, et al., 2017; Clark, 1996; Roberts & Bavelas, 1996).

However, the psychotherapeutic context has certain characteristics that differentiate it from everyday face-to-face dialogue. On one hand, there is an **asymmetry in the information initially known by each participant**, and on the other hand, there is an **intentional use** of **language** by at least one of the parties.

The asymmetry of knowledge refers to the therapist having theoretical knowledge that indicates what a problem is and how to solve it, how to understand the person and what aspects the treatment should focus on. This knowledge, furthermore, does not need to be made explicit to the client in order to help him. The person who comes to therapy session, on the other hand, has an autobiographical knowledge that is only accessible in therapy session through what he/she expresses. From the client's point of view, the dialogue that he/she engages in with the therapist would more closely resemble a normal, everyday dialogue, with the exceptions of confidentiality and the complexity of the matter being treated.

The intentional use of language refers to the fact that, in the case of the therapist, that theoretical knowledge causes him/her to modify some basic aspects of language

such as the way in which he/she asks questions and the way in which he/she constructs formulations in response to the client's content, highlighting certain aspects, ignoring others, doing so frequently or barely speaking. Along with this, the assumptions the therapist makes during therapy sessions may have different origins, but the particularly prominent ones will be those influenced by the person's vision, the problem and the solutions proposed in their theoretical work model (Rodríguez-Morejón, 2018). From the client's perspective, again there are no major alterations, and their use of language is not intentional (they do not consciously modify it, nor do they predetermine or deliberately choose what they say or when to keep silent), although their presuppositions about their life and their problems may, or may not be, content of the treatment as these reflect their way of understanding the world.

This linguistic interaction could be modified by characteristics in the client or the therapist. In our case, the characteristic studied in this doctoral thesis was the **therapist's experience**.

Describing what an expert is in psychotherapy is not an easy task. There is an open debate regarding the

characteristics that should be included in such a description (Shanteau, 1992). On one hand, experience seems to impair the effectiveness of therapists (Goldberg et al., 2016; Okiishi et al., 2006). Along with this, the results of the meta-analyses are also inconclusive: while Walsh et al. (2018) does indicate that greater experience goes hand-in-hand with greater effectiveness, the same authors indicate that other previous meta-analyses yielded results indicating that greater experience brings about less effectiveness (Hattie, Sharpley, & Rogers, 1984; Weisz, Han, & Granger, 1995), or that the two variables are not related (Berman & Norton, 1985).

Something that all these studies do have in common is that they have not investigated process variables as language. If the definition of expertise is based on the level of performance, **studies indicate** that **there are** indeed **differences** in the **use of language**. Expert therapists perform more interventions with: new information, encouraging comments for the client, explanations regarding how the client's problem works, and greater authority, making direct requests to the client about the tasks to be performed out of session (Frojan-Parga, Ruiz-Sancho, & Montaño-Fidalgo, 2011; Vargas-de la Cruz, Pardo-Cebrián, Martínez Sánchez, & Frojan-Parga, 2018).

Method and results

The general objective of this doctoral thesis is to research the use of language by therapists based on the experience variable. To do this, the thesis has a **multi-method design**. This means that the methodologies used in the studies that make up the doctoral thesis are designed to be complementary in order to overcome the limitations of each separate methodology (Anguera, Blanco-Villaseñor, Losada, Sánchez-Algarra, & Onwuegbuzie, 2018). The three **studies share seven central aspects** to facilitate the triangulation of data obtained:

1. Language is **observable** and is studied **objectively** while a record is made using standardized recording devices and procedures, such as transcripts (Mergenthaler & Stinson, 1992).

2. Another key aspect is that the language register is separate from the analysis, it has a **low level of abstraction**. This means that what happens (verbal behavior) is recorded, and later analyzed separately. Thanks to this, records (raw data) can be exploited

and analyzed from different perspectives, or for more sophisticated analyses in the future. This is not the case, for example, when a more abstract construct is measured, such as emotional intelligence (where the record itself is the analysis of intelligence).

3. The continuous recording of language was divided into **speech turns**. These turns are the unit of analysis (i.e. the sample) of this research and are defined as: what the client says until the therapist speaks again and what the therapist says until the client speaks again. This includes all interjections used to maintain the conversation, such as "mmmh" or "alright".

4. The analysis is based on previously presented theoretical approaches where dialogue is collaborative and interactive (Bavelas et al., 2017; Clark, 1996). To support this approach statistically, whenever possible, **prospective lag-sequential analysis** (Bakeman & Quera, 2011) was carried out, as it was considered the most appropriate means to analyze behavioral patterns, that is, knowing the process (Escudero & Rogers, 2004).

5. To be able to **generalize** the results more easily, we have **controlled the client's variability** in this study, both in the observational studies and the experimental study. Different therapists have therefore interacted with the same client in each study. Since the interest lies in the differences between therapists' use of language, treating the client as constant allows us to control the possible alternative explanations related to the difficulty of the case, client idiosyncrasy, etc.

6. Another variable to consider in the variability of results is the theoretical model used by the therapists. To **control** this **variability**, only **systemic therapists** were examined in studies 2 and 3. The first study investigated therapists who used different models because it was relevant to the research objectives.

7. Since no consensus has been found on the most accurate definition of experience or expert, we have chosen a simple definition that facilitates grouping the participants through a questionnaire. Thus, in this study an **expert** is a person with more than ten years of experience working continuously as a

psychotherapist. In addition to that, they must also be trainers of new therapists. The definition of a **trainee** is a person who has two or less years of experience working continuously as a psychotherapist and who is in training at the time his performance is recorded.

Regarding study chronology, the doctoral thesis began with the development and study of the psychometric characteristics of an observational instrument that allowed investigating the language of therapists (study 1). In the second study, the first language analysis was performed comparing experts and novices. In this case, we analyzed a sample group obtained in training contexts that naturally combined novice and expert therapists with the same client (study 2). Since the main difficulty of the study is to generalize the data obtained from the linguistic interaction, the third and the last study were designed to resolve this limitation. That is why the design of the third study is an analogous experiment that allows novice and expert therapists to interact with the same client. The ethics committee of the University of Malaga approved the completion of these three studies (CEUMA: 14-2016-H).

Study One

The objective of this study is to present the SICOLENTE instrument and describe its psychometric characteristics. To do this, **two studies** were carried out. Given that this is an observational instrument aimed at analyzing the psychotherapist-client dialogue, the fundamental psychometric characteristics to be investigated are the instrument's **reliability** (study 1a) and its **construct validity** (study 1b) (Poole & Hewes, 2016). This first study is published in PLoS ONE (Rodríguez-Morejón et al., 2018). The databases and coding manual can be accessed from the repository Open Science Framework (https://osf.io/dyuz2).

The **"language" construct** that measures the final instrument consists of **three dimensions** (a) Conversational Act, (b) Therapeutic Topic and (c) Content, which correspond to the three classic dimensions of semiotics: pragmatics, semantics, and syntax, respectively. Each dimension has several categories, which are mutually exclusive and exhaustive.

- The first dimension, ***Conversational Act***, asks, "What are the psychotherapist and the client doing?"

This dimension encompasses the aspect of language pragmatics and is the only dimension with different codes for psychotherapist and client. The therapists' categories distinguish between whether they are asking or commenting and if they are using the client's information and meanings (information that both share because the client has said it as client's demographic information, his/her problem, etc.) or introducing new information (e.g. interpretations, cognitive restructuring, metaphors, in short, new presuppositions, etc.). Regarding the client, the categories indicate when they accept and continue the therapist's approach or reject the therapist's intervention.

- The second dimension, ***Therapeutic Topic***, asks "What are they talking about?" This evaluates the topic and locates it in time (e.g., a good topic in the future is a goal, whilst a problem can be in the past, present, or future). This dimension is included within semantics, the meaning (to the participants) of what is expressed in the dialogue.

- Finally, the ***Content*** dimension asks, "What action or user status is being referred to in the language?" It includes whether it is observable or not, intentional or not, and whether it was with or about another person. Given the fact that answering this dimension required the coding process to be centered on the verb used, this dimension is included in the syntax.

The SICOLENTE instrument was applied to **two different samples**: the classic *Three Approaches to Psychotherapy* film and a naturalistic sample. 7,710 utterances from 31 sessions (three from the demonstration film and 28 from a naturalistic setting) were coded.

Results obtained using Cohen's kappa index indicate a high degree of concordance in the three dimensions of the SICOLENTE instrument for the **inter-coder** test (.925, .852 and .862) and **intra-coder** test (.97, .936 and .926). **Generalizability study** indicates that most of the variability is associated with Categories (99.84%), being zero for the Observer facet and low for the residual facet (0.156%). The generalizability coefficients obtained were excellent (.00 and .00), confirming that the categories describe in a heterogeneous way (they are exhaustive and mutually excluding) the measured construct, in our case, language.

Regarding the construct validity of the instrument, this was verified by testing the ability of the SICOLENTE to differentiate therapists from five different models in terms of the proportion and code relationships. **Of the proposed hypotheses, 79.17% (19/24) were accepted** (see Table).

Study Two

The objective of this study is to describe the differences in language use according to the therapists' experience level. The therapist-client interactions were examined in individual sessions where a novice therapist began the treatment, and an expert therapist continued it. The SICOLENTE instrument constructed in Study 1 is used to analyze the language.

The design of this study is **observational** and **inter-subject**, carried out in naturalistic settings. **Descriptive** analyzes and **exploratory hypotheses** are performed as a first step toward the study of differences between experts and novices.

There were **six sessions, each with three participants**: a client, a trainee therapist, and the expert. The six sessions produced **3,672 speech turns**. The

Table

Hypotheses and results for the proportion comparison betweetn therapists

		Rogers		Ellis			
	Hypotheses	**%**	***f***	**%**	***f***	**Z**	
H1	the proportion of *Support* codes is higher in Rogers' sample than in Ellis' sample	73.8	127	24.1	14	-6.72*	✓
H2	the proportion of *Improvement* codes is higher in Rogers' sample than in Ellis' sample	2.9	5	0	0	-1.31	×
H3	the proportion of *Emotion* codes is higher in Rogers' sample than in Ellis' sample	12.8	22	1.7	1	-2.44*	✓
		Perls		**Ellis**			
		%	***f***	**%**	***f***	**Z**	
H4	the proportion of *Support* codes is higher in Perls' sample than in Ellis' sample	17.0	23	24.1	14	1.15	×
H5	the proportion of *Improvement* codes is higher in Perls' sample than in Ellis' sample	3.7	5	0	0	-1.48	×
H6	the proportion of *Emotion* codes is higher in Perls' sample than in Ellis' sample	6.7	9	1.7	1	-1.43	×
		Perls		**Rogers**			
		%	***f***	**%**	***f***	**Z**	
H7	the proportion of *Support* codes is higher in Rogers' sample than in Perls' sample	17.0	23	73.8	127	9.88*	✓
H8	the proportion of *New information* codes is higher in Perls' sample than in Rogers' sample	44.4	60	19.8	34	-4.64*	✓
H9	the proportion of *Exploration INI* codes is higher in Perls' sample than in Rogers' sample	21.5	29	2.9	5	-5.15*	✓
		Ellis		**Rogers**			
		%	***f***	**%**	***f***	**Z**	
H10	the proportion of *New information* codes is higher in Ellis' sample than in Rogers' sample	56.9	33	19.8	34	-5.38*	✓
H11	the proportion of *Exploration* codes is higher in Ellis' sample than in Rogers' sample	6.9	4	0.6	1	-2.84*	✓
H12	the proportion of Problem codes is higher in Ellis' sample than in Rogers' sample	51.7	30	30.8	53	-2.87*	✓

Table (continued)

		Ellis		Rogers			
		%	*f*	%	*f*	Z	
H13	the proportion of *Thought* codes is higher in Ellis' sample than in Rogers' sample	27.6	16	8.1	14	-3.82*	✓
		Ellis		**Perls**			
		%	*f*	%	*f*	Z	
H14	the proportion of *New information* codes is equal in Ellis' sample and Perls' sample	53.9	33	44.4	60	1.59	✓
H15	the proportion of *Thought* codes is higher in Ellis' sample than in Perls' sample	27.6	16	5.9	8	-4.19*	✓
		CBT		**SFT**			
		%	*f*	%	*f*	Z	
H16	the proportion of *Support* codes is equal in the CBT and SFT sample	31.1	466	31.9	701	0.51	✓
H17	the proportion of *New information* codes is higher in SFT sample than in CBT sample	20.1	301	33	725	8.60*	✓
H18	the proportion of *Exploration* codes is higher in the CBT sample than in SFT sample	36.9	553	19.4	427	-11.84*	✓
H19	the proportion of *Goals* codes is higher in the SFT sample than in CBT sample	6.3	95	12.3	270	6.01*	✓
H20	the proportion of *Improvements* codes is higher in the SFT sample than in CBT sample	7.9	118	16.2	357	7.41*	✓
H21	the proportion of *Problem* codes is higher in the CBT sample than in SFT sample	35.2	527	12.7	279	-16.26*	✓
H22	the proportion of *Thought* codes is higher in the CBT sample than in SFT sample	21	315	15.8	347	-4.05*	✓
H23	the proportion of *Behavior* codes is equal in the SFT sample and CBT sample	15.4	231	13.7	302	-1.45	✓
H24	the proportion of *Relationship* codes is higher in the SFT sample than in CBT sample	13.3	199	14.1	311	0.69	✗

Note: ✓ = the hypothesis is accepted; ✗ = the hypothesis is rejected; CBT = cognitive-behavioral therapy; SFT = solution-focused therapy

* $Z \geq \pm 1.96 = p < .05$

video-recordings of these sessions were selected from 23 sessions recorded at a private psychology center between 2012 and 2016. The selection criterion used to choose recordings was that the expert, who supervised trainees and was viewing the session in real time on a monitor, entered the sesion based on clinical criteria to continue the treatment's first phase in order to obtain some relevant information. The **expert** was a male, 52 years old, with over 25 years of experience as psychotherapist. He is a clinical supervisor supported by three professional Spanish psychotherapist associations. The **trainees** were six graduate psychologists with no prior experience in psychotherapy.

The **main results** of the study are:

1. Novice therapists make a greater effort to take care of the relationship, using more support and exploration maneuvers; expert therapist introduces more changes of meaning [χ^2 (1, N = 1963) = 20.289, $p < .000$], Z = 4.49.

2. The expert therapist has a higher proportion of *Weak support* (backchannels) than novice therapists [χ^2 (1, N = 1146) = 23.304, $p < .000$], Z = 4.81.

3. When the trainees introduce changes in meaning, they are more likely to be rejected than the expert [X^2 (8, N = 1212) = 73.17, p <.01], Z = 2.85.

Study Three

The objective of this study is to investigate **differences** in the **use of language** between expert and novice therapists. This experimental task also investigates a fundamental aspect of psychotherapists' language when they are in therapy session: the **intentional use** of language. This implies that therapists make quick decisions about what to say and how to say it during the dialogue. The design of the study is **quasi-experimental**, inter-subject, and it is proposed as an **analogous task** to the therapist-client interaction that occurs in psychotherapy. The SICOLENTE instrument is used to codify the language, and procedures of the *Grounded Theory* (Glaser & Strauss, 1967) to analyze the reasoning offered by the participants. In this third study, exploratory and confirmatory hypotheses were formulated and **pre-registered** in the repository Open Science Framework (https://osf.io/23hsw).

The task begins by showing the first fragment of the conversation. When the video stops, the image of the actor disappears. Participants must say out loud what they would in that circumstance and the reason for what they said. The participant's language and justification are recorded with the computer's microphone. The procedure is repeated eight times: a video appears, the participant has time to respond aloud to what the client said, the participant expresses his or her reason for answering in the way he/she did, and lastly, the participant chooses an option that leads to a new video fragment.

The total sample for the study was of **70 therapists**. The total sample analyzed includes 32 therapists: 17 novice therapists and 15 expert therapists that produced a total of 414 speech turns. All therapists took part in the experiment on a voluntary basis after reading and signing the informed consent form at the beginning of the task. All participants were **randomly assigned** either to a *normal condition* or *rejection condition*.

In the *normal condition*, the task attempts to model the real therapist-client interaction obtained in studies 1 and 2 in naturalistic settings. Thus, if participants choose the option that validates or asks about the client's

information, the client will tend to continue talking without disagreeing with the therapist's intervention (95% of the time they will continue the conversation and only 5% of the time the actor will show disagreement with what the therapist said). On the other hand, the change of meaning preset option will be much more likely to be rejected (the actor will continue the conversation 10% and will show disagreement 90% of the time).

In addition, the task has a probability modifier for the preset option that introduces information. This modifier is designed to model the effect of the therapeutic relationship (the more understood the client feels, and the less he demonstrates that he disagrees with the therapist, the easier it will be to accept changes of meaning). Each time the client follows the conversation showing agreement with what the therapist “said” (preset options), the probability that the option that introduces information is accepted by the client increases by 5%.

In the *rejection condition*, the task presents the same actor, only showing the answers in which he appears showing disagreement, regardless of the preset option chosen by the therapist.

The **main results** of the study are:

1. Expert therapists introduce more new information and novices support and explore more [X^2 (1, N = 409) = 6.200, p = .013], Z = 2.49, p = .0064.

2. When it comes to the *Support* code, novice therapists tend to offer a larger number of strong (long) validations, while experts offer shorter validations ("yeah", "right", "got it"). [X^2 (1, N = 148) = 4.033, p = .047], Z = 2.01, p = 0.023.

3. Therapists (regardless of their experience and of whether their proposals are rejected or not), increase the amount of new information they introduce as the session progresses [R^2 = .83, F (1, 7) = 34.096, p < .001] and [R^2 = .563, F (1, 7) = 9, p < .02].

4. Expert therapists introduce less new information in the *rejection condition*, while novices’ behavior is the same in both conditions. Experts adapt more to client responses. [X^2 (1, N = 185) = 4.158, p = .029], Z = 2.039, p = .0207 and [X^2 (1, N = 224) = 0.95, p = .434], Z = 0.308, p = .7578.

5. The use of language is an intentional choice, since the

justifications given by therapists to explain their interventions are consistent with the language used. The most notable reasons by group are, in the case of novices, to validate, clarify, summarize and understand the reason for consultation; in the case of experts, to generate relief, lead the conversation and change meanings.

Conclusion: Data Triangulation

The most important aspect of the design shared by these studies is to maintain the client as a constant in the interaction with therapists. This characteristic resembles what ultimately defines clinical trials: treatment is the independent variable, but it is the same for all participants, it is constant (hence the importance of manualized treatments in psychotherapy). In this case, in addition to the treatment (all therapists are systemic), the client is constant for all therapists and that allows us to study the variables of interest (language and experience).

Thanks to this procedure, we hoped to be able to control central aspects of the therapist-client interaction. We thus eliminate possible alternative explanations of the language analysis related to explanatory factors specific to the client, such as their distinctive way of explaining themselves or the difficulty of a particular case. Data interpretation can therefore focus on the therapist's language and the interaction with the client.

Thus, in Study 2, although the expert therapist had less contact time with clients, he introduced more information (reframes, metaphors, therapeutic presuppositions) than novices. We found the same results in Study 3, where experts chose the option of introducing new information more frequently and their *shared information/new information* ratios were lower than in novices; this means that they introduce more changes of meanings than the latter. Studies 2 and 3 are also consistent in showing how expert and novice therapists differ in client support. Experts seek to validate with shorter interventions, more in the line of backchannels. This does not mean that experts stop making empathic comments or worrying about the therapeutic relationship; it could merely indicates that experts know how to differentiate when it is crucial to validate certain aspects, and which others can be omitted. Meanwhile, novices supports are longer, including more information such as behaviors, emotions or thoughts that they perceive in the

client. This can be understood again as part of a strategy focusing more on creating a therapeutic relationship, which seems characteristic of novices

Finally, another aspect that can also be triangulated refers to the interaction. Both the expert of Study 2 and the experts in the experimental task seem to show a greater ability to adjust to clients. As evidenced by sequential analyses, the expert therapist in Study 2 receives fewer rejections than novices although he introduces many more changes of meanings (while the expert only obtained one Rejection code from the client, novices accumulated up to 4 rejections in a single session). Another indication that experts adapt to the client better than novices was found in the third study, where it was ascertained (contrary to what was hypothesized) that novices do not alter their behavior, whether they are interacting with the client in the normal condition or in the rejection condition. Because they are more capable of adjusting, experts would stop proposing as many changes and new ideas to someone who shows so many disagreements and repeatedly expresses that they are not being understood.

Abstract (Spanish)

Los metaanálisis y estudios en contextos naturales indican que la **psicoterapia** es **eficaz** ayudando a las personas (McAleavey et al., 2019; Smith & Glass, 1977; Wampold, 2001). Al **comparar modelos** para ver cuáles son mejores ayudando a las personas, los resultados indican que las **diferencias son pequeñas o casi nulas** entre las distintas orientaciones (Marcus, O'Connell, Norris, & Sawaqdeh, 2014; Wampold et al., 2017).

Si la psicoterapia es eficaz y no se encuentran diferencias entre los distintos modelos, una explicación es que la eficacia esté relacionada con aspectos que todos los modelos terapéuticos comparten. El estudio realizado por

Wampold (2001) concluía que el 87% de la varianza de cambio obtenida en psicoterapia se debía a factores extra-terapéuticos, en los que se incluye al cliente y sus características. Según esos resultados sólo el 13% de la varianza de cambio podía explicarse por la terapia. Duncan (2010, pp. 20-27) desglosó ese 13% en tres variables: el terapeuta explicaría aproximadamente entre el 5% y el 7%, la relación terapéutica entre 6% y 9% y por último, las técnicas y modelos específicos aproximadamente un 1% de la varianza de los resultados.

La Teoría de los Factores Comunes, sin embargo, también tiene **aspectos criticables**. Dichos **factores** son aún demasiados **abstractos** y complejos de medir y, sobre todo, de relacionar entre ellos. Siguiendo los resultados mencionados, los porcentajes propuestos de varianza de cambio siempre son rangos, y tendentes a no sumar un porcentaje completo. Esto se debe a que muchos elementos de los modelos de factores comunes **se solapan entre ellos** (v.g. es complejo entender las técnicas sin el terapeuta, de igual modo que es complicado entender la relación terapéutica sin el cliente). Aunque se proponga teóricamente que los elementos están interconectados, constructos complejos como "relación terapéutica" o "técnica" dificultan realizar análisis estadísticos que tengan en cuenta la alta interconexión e interdependencia de los distintos factores.

La segunda crítica aquí planteada a la Teoría de los Factores Comunes es su tendencia a responder "¿qué elementos se relacionan con buenos resultados?", **dejando aún sin responder** la pregunta "**¿cómo se desarrollan esos elementos dentro de sesión?**" (Kazdin, 2007). Esta crítica plantea que, al no poseerse suficiente evidencia sobre los mecanismos de cambio que producen la mejoría de los clientes, los distintos modelos podrían estar obteniendo resultados semejantes desde diferentes procedimientos (Doss, 2006). De hecho, **ningún factor común o específico** ha sido estudiado aún de forma que permita **comprender** el **mecanismo causal** que provoca la mejoría (Cuijpers, Reijnders, & Huibers, 2019).

La investigación en psicoterapia debe encontrar paradigmas de investigación que faciliten el estudio tanto de factores específicos como comunes y que tengan en cuenta la alta interactividad e inmediatez de la terapia. Algunos autores plantean que se deben utilizar **diseños innovadores** que permitan superar esas limitaciones

(Gaab et al., 2018), como puede ser la **convergencia de evidencia** (o triangulación de evidencia) a través de experimentos pequeños desarrollados para entender mediante distintos diseños experimentales, un mismo fenómeno (Carey & Stiles, 2016, p. 90; Munafò & Smith, 2018).

Por todo esto, e **intentando solventar las críticas** expuestas anteriormente, esta tesis doctoral plantea al **estudio del lenguaje** como una **solución** metodológica y la justifica por los siguientes motivos.

1. El **lenguaje** es el "**qué** se hace" y el "**cómo**" de todos **los elementos comunes y diferenciadores** que ocurren en psicoterapia: las técnicas se realizan durante la entrevista, como propuesta del terapeuta; el estudio del lenguaje nos permite investigar la interacción terapeuta-cliente, y de esta forma la relación (terapéutica) que se genera con el intercambio lingüístico.

2. El **lenguaje** es un elemento **común a todas las psicoterapias**, necesario y a veces suficiente para obtener mejorías en psicoterapia. Este segundo motivo lleva consigo implícito una concepción más cercana al construccionismo, en el que mediante el lenguaje, terapeuta y cliente negocian un significado nuevo sobre la problemática y planean una acción para solucionarla mediante el diálogo (Fourie, 2012; Van Zyl, 2018).

3. El **lenguaje** es un fenómeno **observable**, que **permite realizar** estudios centrados en el **terapeuta**, en el **cliente** o en la **interacción**. Pese a posibles refinamientos y mejoras en los análisis o instrumentos con el desarrollo de la tecnología y la ciencia psicológica, la muestra (el diálogo) permanece inalterada con el paso del tiempo. Por el contrario, el uso de constructos más abstractos y los instrumentos generados para su estudio pueden ser inútiles en el futuro si se constata que dicho constructo no es relevante o es descartado en la investigación psicológica. En este respecto, la ciencia psicológica ha demostrado en su crisis de replicabilidad que numerosos constructos no poseen evidencia empírica (Klein et al., 2018; Munafò et al., 2017). Cabe señalar que esta propuesta no pretende olvidar constructos psicológicos de establecida evidencia; más bien propone que el análisis de esos constructos clínicos tiene que ir ligado a la interacción psicoterapéutica. Durante el diálogo en consulta es donde se genera y adapta a cada cliente el mito que se proponía en Frank y Frank (1991).

Si esta propuesta sobre el lenguaje fuese válida, el estudio de este permitiría comprender: a) cómo se materializan en consulta las expectativas, la resiliencia, y, en definitiva, el cambio en el cliente; b) cómo se desarrolla la relación terapéutica a lo largo del tratamiento; y c) **qué aspectos o características de los terapeutas** son las que están produciendo que algunos profesionales sean **mejores** que otros.

Ciertos fenómenos del diálogo cara a cara pueden estar presentes en la psicoterapia. Por eso, comprender cómo usamos el lenguaje en el día a día puede darnos explicaciones sobre cómo funciona la terapia.

Uno de los procesos básicos que se dan en el habla cotidiana y en consulta es el uso de formulaciones. Estas tienen la función de mostrar explícitamente acuerdo durante un diálogo. Funcionan como un "pegamento sociológico", una manera de decirle al interlocutor "así que estás diciendo esto" (Peräkylä et al., 2010). Por tanto, las formulaciones siempre hacen referencia a aspectos previos de la conversación. De igual forma, siempre que los psicoterapeutas realizan resúmenes, validaciones, comentarios empáticos o técnicas específicas como reencuadres, redefiniciones e incluso interpretaciones,

éstas se realizan a través de procesos de formular lo que el cliente dijo.

Otro aspecto fundamental del lenguaje en la vida cotidiana y la terapia son las presuposiciones. A través de estas, las personas dan por sentado ciertas informaciones sin la necesidad constante de comprobar si son verdad o no, entendiendo de esta forma que manejan la misma información previa (Stalnaker, 2002, p. 701). Éstas son esenciales para entender las preguntas que se realizan en consulta. De forma resumida, las presuposiciones: a) constriñen y orientan hacia un aspecto particular de la experiencia de la persona que responde; b) tienden a estar implícitas en la pregunta y al responder, son aceptadas; y c) la persona que responde es la que dota de sentido a la pregunta, realizando una revisión en el acto sobre lo preguntado (McGee, 1999). Así, durante los encuentros terapéuticos los profesionales pueden aprovechar las preguntas y sus presuposiciones para hacer reflexionar a los clientes sobre aspectos que ellos no habían pensado previamente.

Los elementos explicados reflejan la alta interactividad del lenguaje y la influencia mutua entre los participantes: las formulaciones sólo aparecen cuando dos

personas intercambian información, la adaptan y modifican; las preguntas, por otro lado, no tienen sentido sin las respuestas y presuponer implica en cierto modo, la capacidad de predecir qué información posee la otra persona y qué conocimiento deberíamos compartir.

El denominado modelo de comunicación colaborativa (Clark, 1996) plantea que, en efecto, los participantes colaboran en pequeñas secuencias, momento a momento, creando un conocimiento compartido poco a poco y asegurándose que lo que está dicho, está también entendido. A todo este proceso lo denominaron grounding. Así, el énfasis está en el aspecto interaccional: dos personas se llegan a entender por lo que ambas realizan durante el diálogo (v.g. las formulaciones, las preguntas). Es la interacción la que genera conocimiento y no es un mero intercambio de información. Bavelas Gerwing y Healing (2017) han encontrado en contextos experimentales un proceso semejante al que denominaron calibración. Este consistiría en tres pasos: un primer interlocutor plantea una información nueva, el segundo señala de algún modo que lo ha entendido (asintiendo, mostrando sorpresa, sonriendo, con interjecciones, formulando lo que dijo el primero, etc.) y finalmente, el

primero confirma que está entendido (continuando con nueva información, diciéndolo explícitamente, asintiendo, etc.).

Se puede afirmar que el diálogo que se da en consulta es **colaborativo** como Clark plantea (1996). Al fin al cabo, siguiendo su propuesta teórica, hacer un tratamiento psicoterapéutico también se englobaría en una acción conjunta, ya que el lenguaje es protagonista y las dos partes (terapeuta y cliente/s) coordinan sus acciones con un fin concreto, en este caso el bienestar del cliente. De esta forma, la información que se va acumulando poco a poco en la conversación terapéutica, sería la que propiciaría un nuevo entendimiento en el cliente del problema y su resolución. Junto a esto, podemos suponer que la nueva información de ayuda (terapéutica) se calibrará como proponen Bavelas et al. (2017). En un diálogo no existe por tanto ninguna parte pasiva, ya que todos los participantes son activos en el desarrollo del discurso y la construcción de significados o conocimiento nuevo (Bavelas, et al., 2017; Clark, 1996; Roberts & Bavelas, 1996).

Sin embargo, el contexto psicoterapéutico presenta ciertas características que le diferencian de un diálogo cara

a cara cotidiano. Por un lado, existe una **asimetría en los conocimientos** de partida de cada uno de los participantes y, por otro lado, existe un **uso intencional del lenguaje** por al menos una de las partes.

La asimetría de conocimientos se refiere a que el terapeuta tiene unos conocimientos teóricos que le señalan qué es un problema y cómo solucionarlo, cómo entender a la persona y en qué aspectos debe centrarse el tratamiento. Estos conocimientos, además, no deben hacerse explícitos al cliente para poder ayudarle. La persona que acude a consulta, por otro lado, posee un conocimiento autobiográfico el cual sólo es accesible en consulta gracias a lo que vaya expresando. Desde la visión del cliente, el diálogo que entabla con el terapeuta sí se asemejaría más a un diálogo cotidiano, con las salvedades de la confidencialidad y de la complejidad del asunto que se está tratando.

El uso intencional del lenguaje se refiere a que, en el caso del terapeuta, esos conocimientos teóricos provocan que modifique aquellos aspectos básicos del lenguaje como la manera en la que realiza preguntas y el modo en el que realiza formulaciones al contenido del cliente, resaltando ciertos aspectos, ignorando ciertos otros,

haciéndolo frecuentemente o apenas hablando. Junto a esto, las presuposiciones que aparezcan en consulta por parte de los terapeutas en todo su lenguaje podrán tener distintos orígenes, pero especialmente, aparecerán aquellas influidas por la visión de la persona, el problema y las soluciones planteados en su modelo teórico de trabajo (Rodríguez-Morejón, 2018). Desde la perspectiva del cliente, nuevamente no existen grandes alteraciones, y su uso del lenguaje no es intencional (no está alterado conscientemente y con una intencionalidad prefijada lo que dice y calla) aunque es posible que sus presuposiciones sobre su vida y su problemática puedan ser (o no) contenido de la consulta ya que reflejan su forma de entender el mundo.

Esta interacción lingüística podría modificarse por características del cliente o terapeuta. En esta tesis doctoral, se ha estudiado la característica de la **experiencia** del terapeuta.

Describir qué es ser un experto en psicoterapia no es una tarea sencilla, existiendo un debate abierto entorno a qué características son las que deben entrar en dicha descripción (Shanteau, 1992). Por un lado, la experiencia parece empeorar la efectividad de los terapeutas o no

mejorarla (Goldberg et al., 2016; Okiishi et al., 2006). Junto a esto, los resultados de los metaanálisis tampoco son concluyentes: mientras que el metaanálisis más reciente encontrado sí indica que, a mayor experiencia, mayor efectividad, los mismos autores, (Walsh et al., 2018) señalan que existen metaanálisis previos con resultados que indican que, a mayor experiencia, menor efectividad (Hattie, Sharpley, & Rogers, 1984; Weisz, Han, & Granger, 1995), o que las dos variables no están relacionadas (Berman & Norton, 1985).

Algo que sí tienen en común todos estos estudios es que no han investigado variables de proceso como el **lenguaje**. Los pocos estudios al respecto **sí han encontrado diferencias**: los expertos se distinguen por hacer propuestas y cambiar significados, hacer comentarios esperanzadores, explicar cómo funciona el problema al cliente y realizar peticiones directas sobre las tareas a realizar fuera de consulta (Froján-Parga, Ruiz-Sancho, & Montaño-Fidalgo, 2011; Vargas-de la Cruz, Pardo-Cebrián, Martínez Sánchez, & Froján-Parga, 2018).

Metodología y resultados

El objetivo general de esta tesis doctoral es investigar el uso del lenguaje de los terapeutas en función de la variable experiencia. Para ello, se ha utilizado un **diseño multimétodos**. Esto significa que las metodologías de los tres estudios que conforman la tesis están pensadas para ser complementarias y así superar las limitaciones que cada una de ellas tiene por separado (Anguera, Blanco-Villaseñor, Losada, Sánchez-Algarra, & Onwuegbuzie, 2018). Los estudios **comparten siete aspectos centrales** para facilitar la triangulación de los datos obtenidos:

1. El lenguaje es **observable** y se estudia de manera **objetiva** ya que se realiza un registro a través de dispositivos de grabación y procedimientos estandarizados, como por ejemplo las transcripciones (Mergenthaler & Stinson, 1992).

2. Junto a estas dos características, otro aspecto fundamental es que el registro del lenguaje se encuentra separado del análisis, o lo que es lo mismo, posee un **nivel de abstracción bajo**. Es decir, se registra lo que ocurre (la conducta verbal) por un lado y ese registro se analiza de forma separada posteriormente. Gracias a esto, los registros (los datos sin procesar) pueden ser explotados y analizados desde distintas perspectivas o análisis más

sofisticados en el futuro. Esto mismo no ocurre, por ejemplo, si se midiese un constructo más abstracto como por ejemplo la inteligencia emocional (en el que el registro, es en sí el análisis de la inteligencia).

3. El registro continuo del lenguaje se ha divido en **turnos de conversación**. Estos turnos son la unidad de análisis (i.e. la muestra) de esta tesis doctoral y se definen como: el enunciado o pregunta del cliente hasta que vuelve a hablar el terapeuta y la intervención del profesional hasta que vuelve a hablar el cliente. Incluye todas las interjecciones utilizadas para mantener la conversación como "ajá" o "vale" y en el caso de que exista solapamiento entre los dos interlocutores, se opta por dar el turno a la persona que se escucha claramente o que no es interrumpida.

4. En lo que respecta al análisis realizado, se parte de los planteamientos teóricos ya presentados en los que el diálogo es colaborativo e interactivo (Bavelas et al., 2017; Clark, 1996). Para sustentar este planteamiento de forma estadística, se ha optado por usar siempre que sea posible, **análisis secuenciales prospectivo de retardo** (Bakeman & Quera, 2011) al considerarse los más oportunos para analizar patrones conductuales, es decir,

conocer el proceso (Escudero & Rogers, 2004).

5. Para poder **generalizar** con mayor facilidad los resultados, en este estudio se planteó **controlar la variabilidad del cliente**, tanto en los estudios observacionales como en el estudio experimental. De esta forma, distintos terapeutas han interactuado con un mismo cliente en cada estudio. Ya que el interés reside en las diferencias del uso del lenguaje de los terapeutas, si se trata como constante al cliente se controlan las posibles explicaciones alternativas referidas a la dificultad del caso, idiosincrasia del cliente, etc.

6. Otro variable a tener en cuenta en la variabilidad de los resultados es el modelo teórico de los terapeutas. Con la intención de **controlar** esa **variabilidad** se han investigado en el estudio dos y tres únicamente a terapeutas de modelos **sistémicos**. En el primer estudio sí se han investigado terapeutas de distintos modelos al ser relevante con los objetivos de investigación.

7. Ya que no se ha encontrado consenso sobre la definición más acertada de experiencia o experto, se ha optado por una definición sencilla que facilite agrupar a los participantes a través de un cuestionario. Así, en este

estudio un **experto** es aquella persona con más de diez años de experiencia trabajando de manera continuada como psicoterapeuta. Además, debe realizar tareas de formación de nuevos terapeutas. La definición de **novato** que se ha utilizado es aquella persona que posee dos o menos de dos años de experiencia trabajando de forma continuada como psicoterapeuta y que está en formación en el momento en el que se ha registrado su ejecución.

En lo que respecta a la cronología de los estudios, la tesis doctoral comenzó con el desarrollo y el estudio de las características psicométricas de un instrumento observacional que permitía investigar el lenguaje de los terapeutas (estudio 1). Después, en el segundo estudio se realizó el primer análisis del lenguaje comparando expertos y novatos. En este caso, se analizó una muestra obtenida en contextos formativos que, de manera natural, combinaba a terapeutas novatos y expertos con el mismo cliente (estudio 2). Ya que la principal complejidad del estudio consiste en generalizar los datos que provienen de la interacción lingüística, se diseñó el último y tercer estudio con la intención solventar esa limitación. Por eso el diseño del tercer estudio es un experimento análogo que permite a los terapeutas novatos y expertos interactuar

con el mismo cliente (estudio 3).

El comité de ética de la Universidad de Málaga aprobó la realización de los estudios que conforman la tesis doctoral (CEUMA: 14-2016-H).

Primer estudio

El objetivo de este estudio es presentar el SICOLENTE y describir las características psicométricas del mismo. Para ello, se realizaron **dos estudios**. Teniendo en cuenta que se trata de un instrumento observacional destinado a analizar el diálogo psicoterapeuta-cliente, las características psicométricas fundamentales a investigar son la **fiabilidad** del instrumento (estudio 1a) y la **validez de constructo** (estudio 1b) (Poole & Hewes, 2016). Este primer estudio está publicado en la revista PLOS ONE (Rodríguez-Morejón et al., 2018) y las bases de datos y manual de codificación se pueden acceder desde el repositorio *Open Science Framework* (https://osf.io/dyuz2).

El **constructo "lenguaje"** que mide el instrumento final consta de **tres dimensiones** que se corresponden con las tres dimensiones clásicas de la semiótica: pragmática, semántica y sintaxis respectivamente. Cada

dimensión ofrece categorías exhaustivas y mutuamente excluyentes, lo que significa que todo el diálogo entre terapeuta y cliente puede ser categorizado en el sistema observacional y que no se pueden codificar en dos códigos distintos, impidiendo el solapamiento entre categorías:

- La primera dimensión se denomina ***Acto Conversacional***. Esta dimensión se corresponde con la pragmática del lenguaje y responde a la pregunta "¿qué están haciendo la terapeuta y el cliente?". Es la única dimensión con categorías distintas para terapeuta y cliente: las categorías del terapeuta distinguen entre si está preguntando o comentando y si está utilizando la información y significados del cliente (información demográfica del cliente, su problemática, etc., información que ambos comparten porque el cliente lo ha dicho) o introduce nuevos significados (interpretaciones, reestructuración cognitiva, metáforas, en definitiva, el terapeuta aporta información nueva directa o presuponiendo). En lo que respecta al cliente, las categorías permiten saber cuándo acepta y continua el planteamiento del terapeuta o rechaza la intervención de este.

- La segunda dimensión, ***Tema Terapéutico***, responde a la pregunta "¿de qué se está hablando?". Las categorías de esta dimensión evalúan la temática y la localiza en el tiempo (v.g., hablar de algo positivo son objetivos o metas; al hablar de algo negativo en el pasado, presente o futuro se habla de la problemática del cliente). Esta dimensión se engloba dentro de la semántica, el significado que tiene para los participantes del diálogo la información que se está intercambiando.

- Finalmente, la dimensión ***Contenido*** responde a la pregunta "¿a qué acción o estado del usuario se hace referencia?". Para ello, se centra en si el verbo incluye una acción observable o no, si puede ser intencional o no y si está relacionada con una persona distinta al cliente. Ya que para contestar a esta dimensión el proceso de categorización se centra en el verbo utilizado, esta dimensión se engloba en la sintaxis.

Este instrumento se aplicó en **dos muestras distintas**: la película *Three Approaches to Psychotherapy* y una muestra en contextos naturales. Se analizaron 7710 turnos de conversación de 31 sesiones (tres de la película de demostración y 28 de la muestra en

contextos naturales).

En lo que respecta a la fiabilidad, los resultados obtenidos utilizando el índice kappa de Cohen indican un alto grado de concordancia en las tres dimensiones del SICOLENTE en la prueba **inter-observador** (.925, .852 y .862) y la prueba **intra-observadores** (.97, .936 y .926). El análisis de la **generalizabilidad** determinó que la mayor parte de la variabilidad se asocia con Categorías (99.84%), siendo nula para la faceta de Observadores y baja para el residual (0.156%). Los coeficientes de generalizabilidad obtenidos también fueron excelentes (.00 y .00), confirmando que las categorías describen de forma heterogénea (son exhaustivas y mutuamente excluyentes) el constructo medido, en nuestro caso el lenguaje.

De las 24 **hipótesis** planteadas para investigar la validez de constructo, **pudieron aceptarse 19**, confirmando que el instrumento era capaz de distinguir el lenguaje de los terapeutas en función de los modelos teóricos que usaran para trabajar.

Segundo estudio

El objetivo de este estudio es describir las diferencias

Tabla

Hipótesis y resultados de la comparación de proporciones entre terapeutas

		Rogers		Ellis			
	Hipótesis	**%**	***f***	**%**	***f***	**Z**	
H1	La proporción del código *Apoyo* es superior en la muestra de Rogers que la de Ellis	73.8	127	24.1	14	-6.72*	✓
H2	La proporción del código *Avances* es mayor en la muestra de Rogers que en la de Ellis	2.9	5	0	0	-1.31	×
H3	La proporción del código *Emoción* es mayor en la muestra de Rogers que en la de Ellis	12.8	22	1.7	1	-2.44*	✓
		Perls		**Ellis**			
		%	***f***	**%**	***f***	**Z**	
H4	La proporción del código *Apoyo* es mayor en la muestra de Perls que en la de Ellis	17.0	23	24.1	14	1.15	×
H5	La proporción del código *Avances* es mayor en la muestra de Perls que en la de Ellis	3.7	5	0	0	-1.48	×
H6	La proporción del código *Emoción* es mayor en la muestra de Perls que en la de Ellis	6.7	9	1.7	1	-1.43	×
		Perls		**Rogers**			
		%	***f***	**%**	***f***	**Z**	
H7	La proporción del código *Apoyo* es superior en la muestra de Rogers que la de Perls	17.0	23	73.8	127	9.88*	✓
H8	La proporción del código *Nueva Información* es superior en la muestra de Perls que la de Rogers	44.4	60	19.8	34	-4.64*	✓
H9	La proporción del código *Explora con nueva información* es superior en la muestra de Perls que la de Rogers	21.5	29	2.9	5	-5.15*	✓
		Ellis		**Rogers**			
		%	***f***	**%**	***f***	**Z**	
H10	La proporción del código *Nueva Información* es superior en la muestra de Ellis que la de Rogers	56.9	33	19.8	34	-5.38*	✓
H11	La proporción del código *Explora* es mayor en la muestra de Ellis que en la de Rogers	6.9	4	0.6	1	-2.84*	✓
H12	La proporción del código *Problema* es superior en la muestra de Ellis que la de Rogers	51.7	30	30.8	53	-2.87*	✓

Tabla (continuación)

		Ellis		Rogers			
		%	*f*	%	*f*	z	
H13	La proporción del código *Pensamiento* es mayor en la muestra de Ellis que en la de Rogers	27.6	16	8.1	14	-3.82*	✓
		Ellis		**Perls**			
		%	*f*	%	*f*	z	
H14	No hay diferencias en la proporción del código *Nueva Información* en la muestra de Ellis que la de Perls	53.9	33	44.4	60	1.59	✓
H15	La proporción del código *Pensamiento* es mayor en la muestra de Ellis que en la de Perls	27.6	16	5.9	8	-4.19*	✓
		Cognitivo		**Sistémico**			
		%	*f*	%	*f*	z	
H16	La proporción del código *Apoyo* es igual en la muestra del cognitivo que la del sistémico	31.1	466	31.9	701	0.51	✓
H17	La proporción del código *Nueva Información* es mayor en la muestra del sistémico que en la del cognitivo	20.1	301	33	725	8.60*	✓
H18	La proporción del código *Explora* es superior en la muestra del cognitivo que en la del sistémico	36.9	553	19.4	427	-11.84*	✓
H19	La proporción del código *Metas* es mayor en la muestra del sistémico que en la del cognitivo	6.3	95	12.3	270	6.01*	✓
H20	La proporción del código *Avances* es mayor en la muestra del sistémico que en la del cognitivo	7.9	118	16.2	357	7.41*	✓
H21	La proporción del código *Problema* es superior en la muestra del cognitivo que la del sistémico	35.2	527	12.7	279	-16.26*	✓
H22	La proporción del código *Pensamiento* es mayor en la muestra del cognitivo que en la del sistémico	21	315	15.8	347	-4.05*	✓
H23	No hay diferencias en la proporción del código *Conducta* en la muestra del sistémico que la del cognitivo	15.4	231	13.7	302	-1.45	✓
H24	La proporción del código *Relación* es mayor en la muestra del sistémico que en la del cognitivo	13.3	199	14.1	311	0.69	✗

Nota: ✓ = la hipótesis es aceptada; ✗ = la hipótesis es rechazada;
* Z ≥ 1.96 = $p < .05$

en el uso del lenguaje en función del nivel de experiencia de los terapeutas. Se investigó la interacción terapeuta-cliente en sesiones individuales en las que un terapeuta novato comienza el tratamiento y posteriormente, son continuadas por un terapeuta experto. Para analizar el lenguaje se utiliza el instrumento construido en el estudio 1, el SICOLENTE.

El diseño de este estudio es **observacional** e **intersujeto**, llevado a cabo en contextos naturales. Se realizan análisis **descriptivos** e hipótesis **exploratorias** como primera aproximación al estudio de las diferencias entre expertos y novatos.

Se analizaron **seis sesiones cada una con tres participantes**: un cliente, un terapeuta novato y uno experto. Esto produce **3672 turnos** de palabra analizados. Las grabaciones que conforman la muestra se seleccionaron de un total de 23 sesiones registradas entre 2012 y 2016 en un centro de formación privado. El criterio de selección de las grabaciones fue que el experto (y supervisor de los novatos), que está viendo las sesiones en vivo gracias a una cámara, decide entrar por criterios clínicos para continuar el tratamiento él desde la primera fase de la sesión. El **experto** cuenta con más de 25 años

de experiencia trabajando de manera continuada como psicoterapeuta. Además, es formador y supervisor clínico avalado por las principales asociaciones españolas de psicoterapia. Los **novatos** son seis psicólogos graduados, cinco mujeres y un hombre, que no tienen experiencia previa como psicoterapeutas.

Los **principales resultados** de este estudio son:

1. Los terapeutas novatos hacen un mayor esfuerzo por cuidar la relación usando más maniobras de apoyo y exploración y el terapeuta experto introduce más cambios de significados [χ^2 (1, N = 1963) = 20.289, p < .000], Z = 4.49.

2. El terapeuta experto tiene una mayor proporción de apoyos cortos (mantenedores de la conversación) que los novatos [χ^2 (1, N = 1146) = 23.304, p < .000], Z = 4.81.

3. Cuando los novatos introducen cambios de significados tienen más posibilidades de ser rechazados que el experto [X^2 (8, N =1212) = 73.17, p < .01], Z = 2.85.

Tercer estudio

El objetivo de este estudio es investigar las **diferencias** en el **uso del lenguaje** de terapeutas

expertos y novatos. Además, esta tarea experimental investiga un aspecto fundamental del lenguaje de los psicoterapeutas cuando están en consulta: **el uso intencional** del lenguaje. Esto implica que los terapeutas toman decisiones rápidas sobre qué decir y cómo hacerlo durante el diálogo. El diseño del estudio es **cuasiexperimental**, intersujeto, planteado como una **tarea análoga** a la interacción terapeuta-cliente que se da en psicoterapia. Se utiliza el instrumento SICOLENTE para codificar el lenguaje y los procedimientos de la *Teoría Fundamentada* (Glaser & Strauss, 1967) para analizar los razonamientos que ofrecen los participantes. En este tercer estudio se plantean hipótesis exploratorias y confirmatorias que quedaron **pre-registradas** en el repositorio *Open Science Framework* (https://osf.io/23hsw).

La tarea comienza mostrando el primer fragmento de la conversación. Cuando el video se detiene, desaparece la imagen del actor y los participantes deben decir en voz alta qué dirían en esa circunstancia y a continuación la razón para escoger dicho comentario o pregunta. Su intervención queda grabada con el micrófono del ordenador. El procedimiento se repite en ocho ocasiones:

aparece un video, el participante tiene un espacio para responder en voz alta a lo que el cliente dijo, dice el motivo por el que dijo eso y por último elije una opción que le lleva a un nuevo fragmento de video.

La muestra total del estudio es de **70 terapeutas.** Tras aplicar los criterios de exclusión, la muestra final es de 32 terapeutas, 17 terapeutas novatos y 15 terapeutas expertos que producen 414 turnos de conversación. Todos los terapeutas han participado en el experimento de forma voluntaria, sin compensación y tras firmar un consentimiento informado. Los participantes fueron **asignados al azar** a las condiciones experimentales, en este caso la condición *normal* o la condición *rechazo*.

En la condición *normal*, la tarea intenta modelar la interacción real terapeuta-cliente que se ha obtenido en los estudios 1 y 2 en contextos naturales. Así, si los participantes eligen la opción que valida o pregunta sobre la información del cliente, éste tenderá a seguir hablando sin mostrar desacuerdo con la intervención del terapeuta (el 95% de las veces seguirá la conversación y únicamente en un 5% mostrará desacuerdo con lo que el terapeuta le ha dicho). Por otro lado, la opción de cambio de significado mostrará muchas más probabilidades de ser

rechazada (el 10% de las veces seguirá sin mostrar desacuerdo y el 90% de las veces mostrará desacuerdo).

Además, la tarea tiene un modificador de la probabilidad para la opción que introduce información. Cada vez que el cliente sigue la conversación mostrando acuerdo con la información que el terapeuta maneja, aumenta en 5% la probabilidad de que la opción que introduce información sea aceptada por el cliente. Este modificador está planteado para modelar el efecto de la relación terapéutica (cuanto más entendido se sienta el cliente, y menos demuestre que esté en desacuerdo con el terapeuta, más fácil será que acepte cambios de significado).

En la condición *rechaza*, la tarea presenta al mismo actor, únicamente mostrando las respuestas en la que aparece mostrando desacuerdo, indistintamente de la opción que elija el terapeuta.

Los **principales resultados** obtenidos en este estudio son:

1. Los terapeutas expertos introducen más informaciones nuevas y los novatos apoyan y exploran más [X^2 (1, N = 409) = 6.200, p = .013], Z = 2.49, p = .0064.

2. En lo que se refiere al código Apoyo, los terapeutas novatos tienden a hacer más validaciones fuertes (largas), mientras que los expertos tienen a hacer validaciones más cortas ("si", "ya", "aham") [X^2 (1, N = 148) = 4.033, p = .047], Z = 2.01, p = 0.023.

3. Los terapeutas (independientemente de su experiencia y de que sus propuestas sean o no rechazadas), aumentan el número de informaciones nuevas que introducen según avanza la sesión [R^2 = .83, F (1, 7) = 34.096, p < .001] y [R^2 = .563, F (1, 7) = 9, p < .02].

4. Los terapeutas expertos introducen menos informaciones nuevas en la condición de rechazo, mientras que el comportamiento de los novatos es el mismo en ambas condiciones. Los expertos se adaptan más a las respuestas del cliente [X^2 (1, N = 185) = 4.158, p = .029], Z = 2.039, p = .0207 y [X^2 (1, N = 224) = 0.95, p = .434], Z = 0.308, p = .7578.

5. El uso del lenguaje se trata de una elección intencional, ya que las justificaciones que los terapeutas explicitan cuando se les pide que expliquen sus intervenciones están en consonancia al lenguaje usado. Las razones más destacables por grupo son para los novatos validar, clarificar, resumir y entender el motivo de consulta; para los expertos generar alivio, dirigir la conversación y cambiar significados.

Conclusiones: triangulación de los datos

El aspecto más importante del diseño que comparten los estudios es la de mantener constante al cliente en la interacción con los terapeutas. Esta característica se asemeja a lo que define en última instancia a los clinical trials: el tratamiento es la variable independiente, pero es igual para todos los participantes, es constante (de ahí la importancia de los tratamientos manualizados en psicoterapia). En este caso, además del tratamiento (todos los terapeutas son sistémicos), el cliente es constante para todos los terapeutas y eso permite estudiar las variables de interés (lenguaje y experiencia).

Con este procedimiento se espera poder controlar

aspectos centrales de la interacción terapeuta-cliente. Por ejemplo, esto ha permitido investigar el modelo teórico de los terapeutas con mayor exactitud en el primer estudio y permite con el estudio 2 y 3 realizar la triangulación. Gracias a que ambos estudios se realizaron teniendo en cuenta al cliente como una constante, se eliminan posibles explicaciones alternativas de los análisis del lenguaje relacionados con factores explicativos específicos del cliente, como su forma de explicarse o la dificultad del caso. La interpretación de los datos puede así centrarse en el lenguaje del terapeuta y en la interacción.

El primer resultado triangulado se puede observar, por ejemplo, cuando en el estudio 2, a pesar de que el terapeuta experto tuviese menos tiempo de contacto con los clientes (con un rango entre los 4 minutos 17 segundos y 20 minutos 24 segundos) este introdujo más información (reencuadres, metáforas, presuposiciones terapéuticas) que los novatos. En el tercer estudio, a pesar de no saber de forma explícita cuál de las dos opciones introducía información (más allá de leer lo que decía cada opción), y que las opciones alternasen su posición en cada ensayo, los terapeutas escogieron las opciones como se esperaba por su nivel de experiencia; los expertos

escogieron como “más parecido a lo que ellos harían” las opciones que introducían información y los novatos las opciones de apoyo y exploración. Otro resultado que se ha podido triangular es que, en ambos estudios, los terapeutas expertos realizan más apoyos cortos (mantenedores de la conversación) que los novatos. Esto podría implicar que la experiencia les hace también más “certeros” sobre qué aspectos son los fundamentales a apoyar y realizar validaciones largas. Por el contrario, los novatos podrían estar realizando más apoyos fuertes para asegurar que el cliente se siente entendido.

El segundo punto de la triangulación hace hincapié en los datos secuenciales. Dentro del marco teórico propuesto, en el que prima la interacción por encima de los acontecimientos individuales, diríamos que el experto no es aquel que simplemente introduce más información nueva, sino el que realiza esos cambios, siendo más “sensible” o “ajustado” a las necesidades del cliente. El que facilita que se integre lo nuevo en lo ya conocido. Por ejemplo, en el estudio dos, mientras que el experto sólo obtuvo un código Rechazo del cliente los novatos acumulaban hasta 4 rechazos en una única sesión. En término absoluto son frecuencias muy bajas. Sin embargo,

no está claro el impacto que esos desacuerdos explícitos puede llegar a tener con otras variables como la relación terapéutica o los resultados clínicos. Otro indicio de que los expertos se adaptan al cliente más que los novatos lo encontramos en el tercer estudio, cuando se pudo comprobar (en contra de lo hipotetizado) que los novatos no alteran su comportamiento, ya estén interactuando con el cliente en la condición normal o en la condición rechazo. Los expertos, más ajustados, sí dejarían de proponerle tantos cambios y nuevas ideas a alguien que muestra tantos desacuerdos y explicita tantas veces que no se le está entendiendo.

Foreword

This doctoral thesis investigates the use of language in therapeutic contexts, comparing expert and novice therapists. It is divided into two parts. Part One is composed of three introductory chapters and presents the evidence, theories and approaches that support the doctoral thesis. Part Two is composed of six chapters that present the doctoral thesis' empirical work.

Part One

- **Chapter zero** summarizes and establishes the work within the Theory of Common Factors in psychotherapy. In relation to this theory, I will review the comparable outcomes for different models, the therapist variable, the client variable and the

therapeutic relationship. Some aspects of the theory will then be discussed, emphasizing the need for an observable and interactive model for the variables. Lastly, the study of language as a variable will be proposed as a solution with which to examine the process and interaction between the elements of the theoretical framework of common factors.

- **Chapter 1** focuses on the main variable of the doctoral thesis: the use of language in psychotherapy. To propose language as an answer to the criticism raised in the previous chapter, some essential theoretical concepts are reviewed that will help to understand the phenomenon. Lastly, I will review the evidence available to date in psychotherapeutic contexts.

- **Chapter 2** presents the variable used to group participating psychotherapists: their professional experience. This chapter evaluates studies that focus on defining said experience, as well as studies that attempt to determine the relationship between experience and other variables, such as effectiveness or performance.

Part Two

- **Chapter 3** presents a justification for the doctoral thesis and sets out its objectives.

- **Chapter 4** explains the general methodology used, and specifies common aspects of the empirical work.

- **Chapter 5** presents the methodologies and results of the three studies that make up this doctoral thesis.

- **Chapter 6** includes the discussion.

- **Chapter 7** lays out the main conclusions of this work.

Doctoral thesis endorsed by the following publication:

Rodríguez-Morejón, A., Zamanillo, A., Iglesias, G., Moreno-Gámez, A., Navas-Campaña, D., Moreno-Peral, P., & Rodríguez-Arias, J. L. (2018). Development of the therapeutic language coding system (SICOLENTE): Reliability and construct validity. *PLoS ONE*, 13(12), e0209751. https://doi.org/10/gfsh2z

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PART ONE

Chapter 0: Psychotherapy

This chapter summarizes the evidence to date of the Theory of Common Factors in psychotherapy: comparable outcomes of different models and the therapist, client and therapeutic relationship variables. Some critical aspects of this theory are then discussed, emphasizing the need for an observable and interactive model for said variables. Finally, language as a study variable within the theoretical framework of common factors is proposed as a solution to these criticisms.

Common Factors

Meta-analyses and studies in naturalistic settings indicate that psychotherapy is effective in helping people (McAleavey et al., 2019; Smith & Glass, 1977; Wampold,

2001). The term *psychotherapy*, in singular, is used to refer to a compendium of models that share similarities, but also exhibit differences. Regarding the latter, the therapeutic models do not usually share a view on the focus of psychotherapy, or how to act in therapy session, or even on what is understood as problematic or what might be a solution to these problems. Despite this, the differences between models do not seem significant in explaining why psychotherapy is effective. When comparing models to determine those better equipped to help people, results indicate that differences between the various orientations are small or practically non-existent (Marcus, O'Connell, Norris, & Sawaqdeh, 2014; Wampold et al., 2017).

If psychotherapy is effective and no differences are found between the different models, one explanation is that their effectiveness is related to aspects shared by all therapeutic models. In itself, this approach is not new. Rosenzweig summarized this proposal of the Common Factors as early as 1936 when he used the *Dodo verdict* metaphor: "Everybody has won and all must have prizes"; although all therapists start from different theories and advance in different directions, it seems that everyone can perform an effective treatment.

The following are the common elements on which there is more consensus: psychotherapy is a meeting between a therapist, who possesses certain theoretical knowledge; a client, who presents some psychological problem and a relationship between them, called therapeutic by the work context.

The study conducted by Wampold (2001) concluded that 87% of the variance of change obtained in psychotherapy was due to extra-therapeutic factors, which include the client and his or her characteristics. According to these results, only 13% of the variance of change could be explained by the therapy. Duncan (2010, pp. 20-27) broke that 13% down into three variables: the therapist would explain approximately between 5% and 7%, the therapeutic relationship between 6% and 9% and lastly, the specific techniques and models approximately 1% of the variance in results.

The following summarizes the evidence to date for each of said factors and the characteristics that explain the percentages presented.

The Common Factor "Therapists"

The therapist's contribution, according to these results, seems to be negligible compared to that of the client. However, studying therapists as a relevant variable in obtaining good results is common sense. After all, they are the ones who know the theories and techniques intended to help.

One of the peculiarities of the "therapist" factor is the great variability it presents. Within the average proposed by the Wampold model (2001), certain therapists show that they obtain results ten times better than their peers, without being clear about what produces these results (Okiishi, Lambert, Nielsen, & Ogles, 2003), as they do not seem related to the years of experience, type of training, gender, age or theoretical orientation (Okiishi et al., 2006; Okiishi et al., 2003; Wampold & Brown, 2005). Even when therapists are compared within a randomized clinical trial, in which they perform the same manualized treatment, differences are observed between them.

Kim, Wampold and Bolt (2006) concluded, in the famous *National Institute of Mental Health Treatment of Depression Collaborative Research Program* clinical trial

(Elkin et al., 1989), that the therapist variable explained 8% of the therapeutic success achieved. However, this data was challenged by Irene Elkin herself who, using the same sample, found no effect referred to the therapist (Crits-Christoph & Gallop, 2006; Elkin, Falconnier, Martinovich, & Mahoney, 2006). Studies show some controversy regarding the therapist's importance in clinical outcomes. This controversy will persist as long as what distinguishes certain therapists, or makes them better than their peers, is not determined. Certain personal attributes and social skills are essential to explain differences among therapists: being respectful, warm, friendly, flexible, experienced or sincere (Ackerman & Hilsenroth, 2003), and skills such as knowing how to perceive the client's emotional state, communicate hope and adapt the therapy to the client (Wampold, 2010, p. 102) seem to be good indications of successful treatments.

In summary, considering the data obtained from the studies, the therapist accounts for between 5% and 8% of the variance of change (Baldwin & Imel, 2013; Crits-Christoph et al., 1991; Huppert et al., 2001; Kim et al., 2006; Saxon & Barkham, 2012; Wampold, 2001; Wampold & Brown, 2005).

The Common Factor “Client”

Given the therapist's contribution to the efficacy of psychotherapy and keeping in mind that only 1% is attributed to specific theoretical and technical models (Wampold, 2001), it is worth considering what the client's role is in their own improvement. Focusing on the client when speaking of extra-therapeutic factors seems logical. Other possible elements that could lead to an improvement, such as the client's economy, obtaining work or his or her marital status, are variables that the therapist cannot modify from the therapy session. The client, however, is part of the treatment and, as with the “therapist” factor, the focus of interest is determining which of the clients’ circumstances can explain the results obtained under the model proposed by Wampold (2001).

Interestingly, the evidence found when studying clients is largely based on research outside of therapy. Thus, studies that summarize the evidence in this regard tend to review research on how human beings cope with major catastrophes (e.g. studies on the resilience construct), how they affect people's expectations of change (through placebo studies) or spontaneous recovery (Bohart & Tallman, 2010; Rodríguez-Morejón, 2016). In addition, clients are active during the therapy process, making changes between sessions, choosing the type of treatment or gender of their therapist (Bohart & Wade, 2013).

In summary, clients' capacities, actions and preferences are also a source of relevant information for all therapies to be effective.

The Common Factor “Therapeutic Relationship”

Finally, therapist and client generate an emotional bond called therapeutic relationship. In addition to this link, the relationship consists of an agreement on two aspects: the goals of the treatment and the method used to achieve them (Bordin, 1979; Norcross, 2010). The therapeutic relationship is therefore a combination of a real and genuine relationship between two people and certain specific characteristics of the therapy context, such as the handling of very complex personal information or the confidential treatment of such information (Gelso, Kivlighan, & Markin, 2018; Wampold, 2015).

The therapeutic relationship is probably the most investigated common factor, being an excellent predictor

of good results in individual therapy (Horvath, Del Re, Fluckiger, & Symonds, 2011), couples and family therapy (Escudero & Friedlander, 2019; Friedlander, Escudero, Welmers-van de Poll, & Heatherington, 2018), and child and adolescent therapy (Karver, De Nadai, Monahan, & Shirk, 2018) or online therapy (Flückiger, Del Re, Wampold, & Horvath, 2018).

Thus, a warm, empathetic therapist, who possesses certain social skills and certain specific knowledge of techniques and theories, generates a good (therapeutic) relationship, in which goals and methods are shared with the client. Along with this, certain aspects of the clients, such as their involvement in therapy, their expectations of change or their natural capacity to overcome a problem, would explain the appearance of similar results in clinical trials and meta-analysis when comparing the efficacy of different psychotherapeutic models.

Criticisms of the Model

The Theory of Common Factors, however, also has aspects worthy of criticism. These factors are still too abstract and complex to measure and, above all, to relate to each other. According to the results mentioned above, the proposed percentages of change variance are always ranges, and tend not to add up to a full percentage. This is because many elements of the common factor models overlap (e.g. it is not easy to understand the techniques without the therapist, just as it is difficult to understand the therapeutic relationship without the client). Although it is theoretically suggested that the elements are interconnected, complex constructs such as "therapeutic relationship" or "technique" make it difficult to perform statistical analyses that take into account the high interconnection and interdependence of the various factors.

The second criticism to the theory raised here is its tendency to offer an answer to the question “which elements are related to good results?”, while leaving the question “how do these elements develop in therapy?” unanswered (Kazdin, 2007). This criticism suggests that, because there is insufficient evidence on the mechanisms of change that produce an improvement in clients, the various models could be obtaining similar results from different procedures (Doss, 2006). In fact, no common or specific factor has yet been studied in such a way that could allow us to grasp the causal mechanism that leads to

improvements (Cuijpers, Reijnders, & Huibers, 2019).

Lastly, the third criticism raised here suggests that there are not that many epistemological differences between the theoretical models that ascribe results to specific factors and theoretical models that attribute results to common factors. Both propose a positivist, reductionist, realistic and linear causation approach between the elements, in which the interactivity present in any encounter between two human beings (and especially in a therapeutic context) is ignored (Fourie, 2012; Gelo & Salvatore, 2016; Stiles, 1988).

Because of this epistemological approach, psychotherapy research has focused on using methodological designs such as clinical trials, which despite being an excellent means of obtaining information from simple linear phenomena, do not facilitate the study of interactive processes. Therefore, certain authors have justified abandoning the use of this gold standard for psychotherapy research (Carey & Stiles, 2016). The reason behind this is that it is difficult to comply with it on the basic premises of clinical trials, namely the independence between independent and dependent variables, given the interactive processes present in psychotherapy. Therapists

choose a course of action based on what clients tell them, the state of the therapeutic relationship and the theory they handle, among other possible variables (Doss, 2006; Krause & Lutz, 2009; Stiles, 2009). Another major criticism directed at the use of clinical trials in psychotherapy is the use of placebo groups, due to the difficulty of constructing a placebo similar to psychotherapy that does not become psychotherapy itself (Gaab, Locher, & Blease, 2018; Locher, Gaab, & Blease, 2018).

Research in psychotherapy must therefore find new paradigms that facilitate the study of both specific and common factors and recognize the high interactivity and immediacy of therapy. Some authors suggest that innovative designs should be used to overcome these limitations (Gaab et al., 2018), such as the convergence of evidence (or triangulation of evidence) through small experiments developed to understand the same phenomenon through different designs (Carey & Stiles, 2016, p. 90; Munafò & Smith, 2018).

For all these reasons, and in response to the criticisms outlined above, this doctoral thesis suggests the study of language as a methodological solution, justified as follows:

1. Language is the "*what is done*" and the means (*how it is done*) for all common and differentiating elements that occur in psychotherapy: the techniques are performed during the interview, as proposed by the therapist; the study of language allows us to investigate the therapist-client interaction, and the (therapeutic) relationship that is generated through this linguistic exchange.

2. Language is a common element to all psychotherapies, necessary and sometimes sufficient to obtain improvements through psychotherapy. This second reason implies a notion more closely related to *constructionism*, where language and dialogue allow therapist and client to negotiate a new meaning for the problem and plan a course of action for its resolution (Fourie, 2012; Van Zyl, 2018).

3. Language is an observable phenomenon that allows for studies focused on the therapist, the client or their interaction. Despite possible refinements and improvements in the analysis or instruments used, thanks to the evolution of technology and psychological science, the sample (dialogue) remains unchanged over time (i.e. raw data). On the other hand, the use of more abstract constructs and the instruments generated for their study may be useless in the future, if it is found that such constructs are not relevant, or are discarded in psychological research. In this regard, the *replicability crisis* affecting psychological science has demonstrated a lack of empirical evidence in many constructs (Klein et al., 2018; Munafò et al., 2017). It should be noted that this proposal does not intend to call into question psychological constructs based on established evidence; rather, it proposes that the analysis of these clinical constructs must be linked to the psychotherapeutic interaction. The dialogue that takes place in therapy is where the *myth*, as put forward in Frank and Frank (1991), is created and adapted to each client. The study of language should enable a verification of how the different elements develop and relate to one another.

If this proposal on language were valid, studying it would facilitate a better understanding of: a) how expectations, resilience and, ultimately, the change in the client materialize in therapy session; b) how the therapeutic relationship evolves throughout the treatment; and c) what aspects or characteristics of therapists are causing some professionals to do better than others.

Chapter 1: Language

Language has been proposed as a method to study common and specific psychotherapeutic processes. In this chapter I will conceptualize and review what is known about language to date.

Describing language is not a trivial task. Human beings are capable of using language in many different contexts and situations: it appears both in everyday life and in protocol meetings; it can be used to objectively describe an event or to tell a fictional story; it can be used in texts or orally in any conversation.

It is therefore hardly surprising that language has been subject of study in many different fields. Language has played a central role in philosophy since its origins in

Ancient Greece, where it was associated with the study of the truth and the existence of the mind. Specifically, the philosophy of language investigates the nature of meaning as the capacity of language to name objects and facts or events (Frápolli & Romero, 1998). This interest in language and its description would give rise to linguistics, a science that studies meaning (semantics), form (syntax), context and use (pragmatics), as well as implicit rules and other formal aspects that constitute a language, such as phonetics or grammar (Aronoff & Rees-Miller, 2017; Cuetos, González, & De Vega, 2015, p. 2).

Another discipline, the psychology of language, studies the linguistic process focusing on the cognitive and neuronal mechanisms involved in its acquisition, understanding and production (Carroll, 2008; Cuetos et al., 2015). The difference with linguistics, according to Cuetos et al. (2015), would reside in that linguistics focuses on the product, while psychology of language focuses on the process. The boundaries between these disciplines and their study of language, however, tend to become blurred. For example, neuroscience has allowed us to know the areas of the brain involved in producing and understanding language by studying people with

brain damage, serving as confirmatory studies of theories and hypotheses made from psychology, cognitive sciences, linguistics and sociology (Hasson, Egidi, Marelli, & Willems, 2018).

Biology has also contributed information about language, focusing on its innate aspects and on the structures and functions located in the brain, or on the emergence of language in our species, allowing us to understand the social process from a biological point of view (Pinos Sánchez, 2017).

In the field of medicine, aside from phoniatrics and the study of pathologies associated with language, interest in the linguistic interaction between patient and physician emerges as the nuclear element of patient-centered medicine and the biopsychosocial approach to the individual (Bensing, Verhaak, van Dulmen, & Visser, 2000). This interest has generated numerous instruments to investigate language and the physician-patient interaction (Zill et al., 2014) that allow to verify, for example, how physicians' validations and explorations related to drug prescriptions (Epstein et al., 2007) or the differences caused by the physician's gender in interviews with patients with depression (Roter et al., 2014).

There are many other disciplines with a long-standing interest in the study of language, such as speech therapy, which focuses on the clinical aspects of language; sociology, responsible for understanding language as part of a social phenomenon; or computer sciences, which investigate how computers may understand and produce language in a way similar to how humans do.

The above should serve to caution the reader that, although there are numerous disciplines and ways of understanding language, this chapter does not intend to conduct a detailed review of each single one. The objective of this chapter is to expose and review the importance of language in a specific context such as psychotherapy. This chapter also reviews the most relevant basic concepts about language use. From there, we will continue by presenting studies carried out in clinical contexts where language is the main variable investigated.

Concepts and Theoretical Assumptions about the Use of Language

One of the basic processes that occur in everyday speech and in therapy is the use of *formulations*. The term appeared for the first time in the work of sociologists

Garfinkel and Sacks (1970), and later in the work of Heritage and Watson (1979), who developed the most widespread definition of the term as used by researchers (Peräkylä, Antaki, Vehviläinen, & Leudar, 2010, p. 31).

Formulations have the function of explicitly showing agreement during a dialogue. They function as a "sociological glue", a way of telling the interlocutor "so, what you are saying is this..." (Peräkylä et al., 2010). Therefore, formulations always refer to previous aspects of the conversation.

Another essential feature of formulations is that they are constructed through three processes: preservation, elimination, or transformation of words (Heritage and Watson 1979). During a conversation participants therefore share information and, through formulations, they summarize and modify it by maintaining certain data and eliminating or modifying other information.

Similarly, whenever psychotherapists make summaries, validations and empathic comments, or use specific techniques such as reframes, redefinitions and even interpretations, this is done through a process of formulating what the client previously said. Accepting the

concept of formulations in therapy would imply abandoning the classical conception of the existence of “neutral interventions” (which do not alter or introduce information by therapists) and embrace a position where the therapist is always modifying (directing) the clients’ content to a lesser or greater extent. As we will see in the next section, these modifications are influenced by each therapist’s theoretical models. Examples of what the concept of formulations refers to are shown in sequences A, B and C of Table 1.

Another fundamental aspect of language in everyday life and therapy are *presuppositions*. They express that people take for granted certain information without the constant need to verify whether they are true or not, therefore understanding that they handle the same prior information (Stalnaker, 2002, p. 701).

Presuppositions can be identified in sentences and questions. For example, when someone says, "Peter has quit smoking" he/she would be presupposing "you know the Peter I mean" and also "Peter used to smoke." If someone asks, “Will you take out the trash this afternoon or at midnight?” he or she presupposes that the action of taking out the trash will be carried out by the person who

Table 1

Example of formulations, questions, presuppositions and calibrating information

SEQ	Turn	Participant	Language	Process
A	1	Client	Well, *I’ve been feeling bad for a long time; I don’t want anything* and **don’t know what’s wrong with me**. I’m lonely, out of work, and *having a terrible time every day,* especially in the afternoon and evening	Enunciates an internal state, which expresses emotions (italics) and a cognitive aspect (bold)
	2	Therapist	*Alright*... **you don’t know what’s wrong with you**	Formulation: preserve the words in bold, add those in italics and eliminates other words from Turn 1. Here, the therapists preserverd the cognitive aspect
B	1	Client	**Well, the last time my friend visited me I was better** but then I got sad and felt worse	In bold is what a solution-focused therapist will preserve
	2	Therapist	Tell me more about that moment when you were better, what was different?	Omit the worsening information and ask about the moment of improvement, assuming something different happened
C	1	Client	Well, the last time my friend visited me I was better **but then I got sad and felt worse**	In bolds is what a cognitive-behavioral therapist will preserve
	2	Therapist	What do you usually think when you’re worse?	Omits the improvement and asks thoughts associated with that emotion, if any thoughts are related to that emotion
D	1	Therapist	What happens differently when you manage to have a quiet conversation?	Question with the following presuppositions: • They have quiet conversations • In which something different happens
	2	Client	I’ve no idea... I imagine we talk about less important things	Accepts the presupposition: they do have calmer conversations and the difference is that they talk about less important things
	3	Therapist	OK	Clarifies that he/she has understood the clients

he or she is talking to. This characteristic of language can go unnoticed in everyday life, and only recently have its neurophysiological correlatives been investigated (Domaneschi, Canal, Masia, Lombardi Vallauri, & Bambini, 2018; Masia, Canal, Ricci, Vallauri, & Bambini, 2017). It constitutes an essential part of language and very particularly of the questions asked during therapy.

In his doctoral thesis, McGee (McGee, 1999; McGee, Del Vento, & Bavelas, 2005) proposed a functional theoretical model for questions in which presuppositions were an essential part. The model focused on psychotherapeutic contexts, suggesting that presuppositions in questions: a) constrain and guide toward a particular aspect of the respondent's experience; b) tend to be implicit in the question and are accepted in the answer; and c) it is the person who answers who gives meaning to the question, instantly reviewing what was asked[1] (McGee, 1999, pp.172-174).

1. The McGee model (1999) has a total of nine steps. This is a summary with three steps that present the fundamental aspects for an understanding of the topic.

Table 1 *(continued)*

SEQ	Turn	Participant	Language	Process
E	1	Therapist	How many brothers and sisters do you have?	Question with the following presuppositions: the person has siblings
	2	Client	One brother and one sister	• Accepts the presupposition that she has siblings • Answer the question
	3	Therapist	One and one, OK	• Formulation: transforms and paraphrases what the client says. Make explicit that she understands the answer • The number of siblings and their genders has been calibrated
F	1	Couple partner#1	What day are we meeting this week?	Question with the following presuppositions: • They will meet a given day • That day is this week
	2	Couple partner#2	Thursday afternoon	Answer, accepting: • He is going to meet her this week • Prepares the answer on the spot. Here, the chosen day
	3	Couple partner#1	Better on Thursday morning, I'm meeting my mother in the afternoon	Answers the above by adding new information: • in the morning • I'm meeting my mother in the afternoon
	4	Couple partner#2	OK, darling	• Accepts the new information. • The day and time they meet has been calibrated

Note. Only the assumptions made in questions are shown to facilitate presentation.

During therapeutic meetings, professionals can thus take advantage of questions and the assumptions they make, to make clients reflect on aspects they had not previously assumed (taking for granted a greater or lesser amount of information).

For example, if one presupposes that anxiety is having an effect on a client's physiology, this can be done mildly: "Is anxiety affecting your body in any way?" Or with a larger presupposition, "What aspects of your body are being affected by anxiety?" This inherent ability in language is of special interest in questions asked in psychological therapy, as they can highlight certain aspects of the client's life ("if you ask me about my body, it will be because it is important in anxiety") and discard other aspects. The decision on which aspects to highlight or obviate, as we will see later, is also related to the theoretical models chosen, as was the case with formulations (in Table 1, examples B and C show these differences in the use of language).

Until now, all elements explained (formulations, presuppositions and questions) reflect the high interactivity and mutual influence between participants. Formulations only appear when two people exchange,

adapt and modify information. Questions, on the other hand, make no sense without the answers, and presupposing somewhat implies the ability to predict what information the other person has and what knowledge we should share. However, all this does not yet explain how two people come to understand each other and generate shared knowledge.

Psycholinguist Herbert Clark and his collaborators developed what is known as the *collaborative model* for dialogue (for a summary of this, see Clark, 1996), arguing that dialogue is a *joint action* where none of the activities can be understood independently. The model suggests that participants collaborate in small sequences, moment by moment, gradually creating shared knowledge and making sure that what is said is also understood. All this is defined as *grounding* (Clark, 1996; Clark & Schaefer, 1987; Schober & Clark, 1989).

Based on Clark's model, people would come to understand each other thanks to previous shared knowledge (about the culture of the interlocutors, the lexicon of the language they use, the shared situation during the dialogue) and by the gradual accumulation of new information that occurs during the dialogue, and

through grounding. The author pointed out that this process is probably made up of two parts. In the first part, *A* presents information for *B* to consider; in the second part, B accepts said information. Finally, *A* accepts that *B* accepted and understood the information. All this, according to their proposal, handled in at least two different *tracks* of information: the main track with relevant information, the dialogue's objective; and the secondary track, where signals accumulate to clarify that the relevant information is being understood (Clark, 1996, p. 241).

Therefore, the model emphasizes the interactional aspect: two people come to understand each other thanks to what they both do during the dialogue (e.g. formulations, questions). Interaction generates knowledge; it is more than a mere exchange of information from participant *A* to participant *B*.

To demonstrate that language is indeed collaborative, Schober and Clark (1989) conducted an experiment with fourteen triads of people. Two individuals, participants *A* and *B*, could not see each other but had to organize tangram figures by coordinating through dialogue, while a third individual, participant *C*, listened to the dialogue without participating, and performed the same organizational task. If the dialogue consisted of nothing more than a flow of information from sender to receiver, where the receiver does nothing, there should be no difference between the two recipients of the information, *B* and *C*. The results showed that, after each trial, the descriptions were increasingly shorter, with fewer words required for *A* and *B* to understand which figure they were referring to, meaning that grounding was occurring (Clark, 1996, p. 221). Both participants presuppose knowledge of the figure in their language and therefore do not require such extensive descriptions. On the other hand, participants *C* always performed the task significantly worse, with more failures and difficulty understanding descriptions. According to the authors, participants C presented these errors because they had not actively participated in the process of accumulating new information. They could not verify with participant A that what they had understood was correct.

Bavelas, Gerwing and Healing (2017) have recently contributed to the investigation of mutual understanding with a detailed explanation of the steps necessary for two people to understand each other during a dialogue. This

process, which the authors have called *calibration*, was developed from a random sample where two people met for the first time, without scripts or preconditions. In this way, they hoped that the sample would be representative and have ecological validity to explain how the phenomenon plays out daily.

After analyzing 19 conversations, they were able to verify that people calibrated new information 97% of the time through a quick sequence (on average five seconds long) made up of three steps: interlocutor 1 raises new information, interlocutor 2 indicates he/she has understood (nodding, showing surprise, smiling, with interjections, formulating what the first said, etc.) and finally, interlocutor 1 confirms that he/she is being understood (continuing with new information, explicitly saying it, nodding, etc.) (to review all functions, Bavelas et al., 2017). Finally, they argue that for the three steps to make sense and dialogues to be constant, the triple sequences must overlap. For example, step two of a sequence could also be step one of the following (see example D, E and F in Table 1).

Summary box 1

Certain phenomena of face-to-face dialogue may be present in psychotherapy. Therefore, understanding how we use language daily can provide us with explanations regarding how therapy works.

The above paragraphs present a theoretical model that suggests dialogue (a face-to-face conversation between two people) is a collaborative activity, in which information is generated through interaction. It can be concluded that dialogue occurring in therapy is collaborative, as Clark proposes (1996). After all, according to his theoretical proposal, a psychotherapeutic treatment would also be considered a joint action, since language is the central element and the two parties (therapist and client) coordinate their actions with a specific purpose, in this case, the client's wellbeing. Thus, the information gradually accumulating throughout the therapeutic conversation is what would bring about a new understanding in the client of his/her problem and its resolution. We can also assume that the new and helpful (therapeutic) information will be calibrated as proposed by Bavelas et al. (2017). There is therefore no passive party in a dialogue, since all participants are active in the development of discourse and the construction of meanings or new knowledge (Bavelas, et al., 2017; Clark, 1996; Roberts & Bavelas, 1996).

Instruments and Methods to Study Language in Psychotherapy

The study of language, and especially of the interaction between therapist and client, is carried out in two basic steps: first, a reliable record of the interaction must be obtained (what was said, who said it, how it was said, etc.); and second, that record must be analyzed through a system of specific categories or methods of analysis that allow us to go from that record to other molecular elements (codes, discrete sequences, events, etc.), which are more useful and operational in answering the questions of research raised.

Since the first step is the record, research in language and therapeutic processes has benefited from technological evolution and the emergence of devices such as the phonograph. Thanks to the phonograph, in the 1940s researchers Porter (1941) and Snyder (1945) were able to record sessions using the person-centered model (Rogers, 1951) and analyze them through what are considered the first category systems in psychotherapy. Porter and Snyder developed the instruments to study the therapists' language and examine the influence of theoretical models on the use of language, discovering patterns in how it is altered depending on the time of therapy (Porter, 1941; Snyder, 1945). Since then, the construction of instruments for language coding has been a continuum in psychotherapy research.

Each instrument developed focuses on certain aspects of language and the therapist-client interaction. For example, instruments may focus on semantics (if the subject of the conversation is positive or negative; the presuppositions used in language), or on pragmatics (how a question affects the interviewee, an implicit presupposition, a client rejection to the therapist) or in combinations of both or other characteristics. This conceptual and methodological richness also entails certain limitations, mainly in the comparison of results between studies and their replicability. In the absence of a standard, each research group interested in this area of study has created its own categories, defined the level of study (speech turn, utterances, etc.), coding processes and relevant statistical analysis.

Elliott et al., (1987) probably carried out the first study in which different language coding instruments were compared. In this case, the comparison comprises the six instruments developed by the authors. To carry out

the comparison, they coded seven clinical sessions using different theoretical models and calculated correlations between each instrument's different categories, thus conducting a convergence validity analysis. Their results were specified under the following categories: question, information, advisement, reflection, interpretation and self-disclosure.

2015 saw the publication, almost three decades later, of what is to date the most recent systematic review of language coding instruments in psychotherapeutic contexts (Gumz et al., 2015). Of the 34 instruments that met the review eligibility criteria, only two were developed to measure the therapist-client interaction: the *Psychodynamic Interventions Rating Scale* (PIRS) instrument and the *Coding Interaction in Psychotherapy* (CIPS) instrument (Milbrath et al., 1999; Schindler, Hohenberger-Sieber, & Hahlweg, 1989 respectively). Both instruments present categories to encode the language of the therapist and the client. The PIRS has a psychodynamic theoretical framework and its categories focus on analyzing therapist-client interactions in interpretive and *transfer/countertransference* processes. The CIPS was developed from a theoretical behavioral framework, with categories that describe both the form and the theme of language. For example, it has a category to encode when the therapist asks about emotions and another category for when he/she asks about unknown events.

All other instruments included in the review (Gumz et al., 2015) were constructed with the intention of using language to investigate aspects other than interaction, such as a therapist's adherence to a treatment and his/her competence, or very specific constructs and moments in therapy, such as transference or the therapeutic process in a treatment of borderline personality disorder. Lastly, the authors point out two characteristics that most instruments presented: first, most of the instruments had been constructed with one or more psychotherapeutic models as a theoretical basis; and second, most of the instruments reviewed showed deficiencies in the psychometric characteristics of reliability and validity (Gumz et al., 2015).

Along with the observational category systems that investigate language, other methods have also benefited from the possibility of recording clinical sessions, such as, for example, *conversational analysis* and *microanalysis*.

Conversational analysis consists of a focused, qualitative and detailed study of specific aspects of language (e.g. a specific type of question, a specific formulation) that occur in any social interaction, using very detailed transcripts where the sequentiality of facts and interaction are fundamental aspects (Peräkylä et al., 2010). The result of the conversational analysis is a detailed description of the phenomenon studied (in daily or institutional use), without using categories or statistical tests.

Microanalysis, on the other hand, is a flexible and inductive method, which focuses on studying face-to-face dialogue through audiovisual recordings. When investigating using this method, visual information (hand and facial gestures, gazes) and auditory information (what is said, how it is said) is taken into account to produce a thorough study of observable aspects only (Bavelas, Gerwing, Healing, & Tomori, 2016). In so doing, microanalysis rejects any mentalistic concept and focuses on understanding the visible actions that could explain how people communicate. Microanalysis does perform statistical analyses to corroborate hypotheses and, in many cases, these studies have been conducted in

experimental contexts.

All these methods allow an analysis of language as proposed at the beginning of this section, generating a record that is subsequently analyzed. The following subsections will review studies, carried out with these methods, of the language used by the therapist, the client and, finally, the language used in their interaction (the relationship).

The Therapist's Language

One of the main uses of language analysis instruments and methods has been to investigate the therapist. These studies suggest that language analysis may help us understand how techniques are implemented in therapy session and investigate the influence of certain characteristics of therapists, such as theoretical models, adherence to treatment, expertise, etc. In summary, these studies seek to answer how the therapist performs the work and the influence of certain characteristics on its execution.

The characteristic that has traditionally received most interest is the theoretical model and its influence on the therapist's language. For example, Korman, Bavelas and

De Jong (2013) compared the use of formulations during the first six minutes of therapy using three different models (two solution-focused therapists, two cognitive-behavioral therapists and one motivational interviewing therapist), finding that solution-focused therapists retained more exact words used by the client in their formulations. They also added fewer words of their own to what the client had said. For example, if the client said, “I am having a really bad time right now”, the therapist could answer “you are having a really bad time”. These results are congruent with the importance given to language by the theoretical assumptions of a constructivist model such as a solution-focused model (de Shazer, 1985). All other therapists analyzed in the study reformulated what the client had said by introducing, in comparison, more new words. Using the same example, the other therapists could have said something like "you are having a very difficult time now."

Along the same lines, Tomori and Bavelas (2007) showed that, along with the words used, models also influenced the number of formulations and questions asked by therapists and the topics they selected to work with clients. Based on their results, solution-focused

therapists asked about and formulated positive topics (talking about moments when the problem does not appear, or the goals that the client wants to achieve), while client-centered therapists only made formulations, and these focused on negative topics (talking about the client's problem).

These differences in the use of language related to theoretical models seem to be very stable, since they were found even when comparing three therapists with different theoretical models working with the same client (Essig & Russell, 1990; Hill, Thames, & Rardin, 1979; Shostrom & Riley, 1968). Although it is the same client and therapists therefore listen to the same story (i.e. her reason for consultation, how she understands it), they differ in how they use the language and therefore, in the interaction they generate with the client.

Finally, regarding formulations, the study by Weiste and Peräkylä (2013) investigated the roles they play in different models. They found that psychodynamic therapists differentiated themselves by making formulations that related the present to the past, while cognitive therapists made formulations that exaggerated the client’s ideas. It should be noted that formulations

here not only reflect the underlying theory, but also technical aspects such as psychoanalytic interpretation or the downward arrow technique in cognitive behavioral therapy. As expected, some formulations were also shared by both models: both therapists made formulations in which they only kept the client's words with interesting therapeutic content, or formulations that modified the client's description by paraphrasing it.

Therefore, differences appear in a more microscopic investigation (by words, as in Korman et al., 2013), while a more global study (by functions) highlights not only the differences, but also the similarities found in the language used. To illustrate this with an example: all therapists point out interesting therapeutic aspects or paraphrase by changing some aspects (the function), but each therapist will choose to highlight certain words (the content) or topics in particular, depending on their theoretical model. These differences and similarities between disparate models, such as psychoanalysis and behavioral therapy, have also appeared in the results of studies that use codification instruments (Stiles & Shapiro, 1995).

Theoretical models also encourage therapists to make certain assumptions in their comments and questions. In

this regard, Grant (2012; replicated by Neipp et al., 2016) investigated the differences created by two different types of questions in terms of the self-efficacy, affect and sense of goal attainment felt by participants when solving a problem in their daily lives. To do this, he designed two experimental conditions analogous to questions asked in therapy session, allowing him to measure said differences based on whether: a) the questions generated focused on solutions (e.g. “Imagine the problem is magically resolved, how is the situation now?”) or b) the questions generated focused on the problem (e.g. "How long has your problem been going on?"). Questions focusing on solutions produced significant changes in the variables studied (increase in positive affect and decrease in negative affect, greater sense of self-efficacy and goal attainment) while no statistical relationship was found between the questions that focused on the problem and the changes in studied variables.

Using a similar approach, Healing and Bavelas (2011) found evidence that the presuppositions in questions that focus on personal agency vs. external causes can also lead people to see themselves as responsible, or not, for the results of the experimental task, maintaining the effect at

least one week after the task and providing better results when the participants perform the task for the second time. That is, results are consistent with McGee's suggestion (1999) that questions not only encourage us to respond accordingly, but also to focus on seeing the facts in a certain way, thus modifying our behavior.

Language as a Therapist's Skill

Therapeutic models aside, another approach to language use is to investigate it as a characteristic of the therapist. From this perspective, language is a skill (e.g. interpersonal skills, helping skill, communication skill) that the therapist possesses. The "skill level" is what is used in research. Language is therefore treated as a "how much", and not as a "how".

One procedure usually used to investigate these skills is through tests that allow the therapist's performance (i.e. skill level) to be recorded as the Facilitative Interpersonal Skills tasks (FIS) presented and reviewed in Anderson and Patterson (2013). In these tasks, participants are asked to imagine that they are in the middle of a therapeutic conversation while viewing small fragments of real sessions represented by actors. At some point, the task

allows the participant to respond to the client as if they were a therapist.

Through FIS (Anderson, Crowley, Himawan, Holmberg, & Uhlin, 2016), the authors conducted a randomized clinical trial with a broad sample that included not only doctoral students in a clinical training program but also doctoral students in other programs (biology, experimental psychology, communication, history, chemistry, comparative arts and human sciences). They were grouped according to their interpersonal skills. This design allowed comparisons to be made between two groups of "therapists": those with high versus low interpersonal skills. In addition, the study had a waiting list group as a control group, in which no treatment was performed. The first two groups (23 participants) interacted with "clients" from the general university population who were in significant distress (measured with OQ-45; SCL-90-R among others) but were not seeking psychotherapy. The trial's results showed that clients improved the most in the high interpersonal skills condition, and outcomes were not influenced by the clinical training status. This study can be seen as a demonstration that what makes clients improve is

connected to interaction and language use. Another possible explanation is that these interpersonal skills contribute to the development of the therapeutic relationship, and this, in turn, to the achievement of good therapy results (Flückiger et al., 2018). In a study with therapists using solution-focused therapy and brief psychodynamics (Heinonen, 2014), results showed that the basic relationship-creating skills displayed by professionals allowed to predict better scores in WAIS (therapeutic relationship) and better clinical improvement, measured using SCL -90 with follow-ups of up to three years.

The same group (Anderson, McClintock, Himawan, Song, & Patterson, 2016) also used interpersonal skills to predict treatment outcomes. This prospective study measured therapists' pre-existing interpersonal skills in the early stages of their training in psychotherapy. After about a year, these novel therapists began to work with real cases. The analysis conducted showed that therapists with higher pre-existing interpersonal skills obtained better results (i.e. they were more effective) than those with lower pre-existing interpersonal skills, with the effect being attenuated the longer the duration of therapy. A year later, another five-year prospective longitudinal study again showed that high levels of interpersonal skills in novice psychotherapists predicted better client outcomes (Schöttke, Flückiger, Goldberg, Eversmann, & Lange, 2017). In this case, the authors performed measurements in discussion groups and individual interviews, and not through analogous tests such as FIS.

A meta-analysis by Cuijpers et al. (2012) also supported the unique contribution made by the therapist's social skills and language in the treatment of major depression. The study investigated all clinical trials conducted to date that included psychotherapeutic or pharmacological treatments, control groups and *non-directive supportive therapy* (hereafter NDST). NDST treatments are based on aspects that are common to all psychotherapeutic models, such as the language used in backchannels, empathic comments, summaries and questions that are used to organize patient information. In these treatments, therapists did not use any technique of change, advice or prescription guided by a psychological theoretical model. The meta-analysis thus understands that a complete psychotherapeutic treatment would consist of techniques derived from the theoretical models,

and the use of language present in NDST, such that each element can be isolated and its importance verified in the treatment outcomes. Their results showed that, in comparison to specific factors such as techniques or changes outside of therapy, nonspecific factors deployed in NDST explained 49.6% of patients' improvement, with 17.1% caused by specific factors (techniques and models) and 33.3% by factors external to therapy.

In summary, according to these studies a high level of this skill (which points at being capable of making clients feel comfortable and understood, thus facilitating the dialogue) is connected with obtaining good clinical outcomes, and can even be seen as an essential part of generating predictive models for success.

The Client's Language

Client language is also a subject of research. The central idea in these studies is to establish a relationship between a psychological condition and a specific use of language, which usually refers to the lexicon that the person adopts. Language is therefore treated as a sign of the symptomatology presented by the client, or as evidence of therapeutic progress. In short, a means from which to obtain information.

Regarding client symptomatology, for example, we know that people suffering from anxiety, depression or suicidal ideation express themselves in internet forums using more words that reflect absolutist thinking (e.g. "always", "all", "never") in comparison with people who suffer from other psychological or health issues (Al-Mosaiwi & Johnstone, 2018). Specifically, people with depression could be identified by their greater tendency to use the first person of the singular, compared to other people (Edwards & Holtzman, 2017). These results can be solid enough to generate predictive models comparable to more conventional screening tests of suicidal ideation and psychiatric symptomatology (Cook et al., 2016).

People's choice of words may allow us to analyze other fundamental aspects for psychotherapy and psychological research, such as personality traits (Boyd & Pennebaker, 2017). Using algorithms that analyze language, Kwantes, Derbentseva, Lam, Vartanian and Marmurek (2016) managed to accurately predict participants' personality in three of the five factors that make up the Big Five test.

Finally, these analyses of the client's lexicon can be used as an indication of therapeutic change. People modify the way in which they refer to or express themselves in therapy session after a successful treatment. For example, the evaluation of a successful treatment for Rodríguez-Arias and Venero (2010) includes the observation that the client starts to use past-tense verbs when talking about the issue that made him/her seek therapy. People in a successful treatment of personality disorder begin to make descriptions using more verbs in the present tense, more positivist emotions and, at the same time, they stop using the pronoun "I", past or future verbs and negative emotions (Arntz, Hawke, Bamelis, Spinhoven, & Molendijk, 2012).

Something similar occurs when behavioral problems are treated through family therapy. Children, for example, reduce how much they talk about their leisure time (e.g. watching TV, going out with friends) and increase the time they talk to therapists; parents start to refer to themselves more often, using action verbs (“do”, “move”, “go to”) and speak less about their children and how problematic they are (Stevens, Ronan, & Davies, 2017).

Overall, the client's language can help to uncover what the client’s problem is (which he/she expresses in therapy session), and to determine his/her improvement. The client’s lexicon and how they express themselves would therefore be indicative of therapeutic progress. The following section reviews the interaction between information provided by clients (about their improvements or their problems) and the therapist’s use of language.

Language in Interaction

So far, the research could give the impression that language is an isolated characteristic of psychotherapists or clients. Even the language-coding instruments developed tend to place more emphasis on the role of one (the therapist) of the two participants (Gumz et al., 2015). When research focuses on the therapist-client interaction, there is some evidence that the psychotherapist and client produce the dialogue together, such that it becomes impossible to understand what one does without taking into account the other, and vice versa.

Stiles and Shapiro (1995) used a sample of more than 360,000 speech turns to ascertain that the therapist-client

interaction presents similarities and differences depending on the model used and the stage of therapy, as mentioned above. Beyond these results, the interesting thing about the study lies in the fact that the units of measurement used in the investigation, verbal exchanges (i.e. clusters of conversational acts that tend to occur together, obtained through factor analysis) could only be understood as a joint activity, a complementary act between therapist and client, in which the language of one causes the language of the other.

Regarding this mutual influence, research by Smock Jordan, Froerer and Bavelas (2013) expanded on the study previously conducted by the research group (Tomori & Bavelas, 2007) and verified, by means of microanalysis, how the choice between talking about positive or negative topics (apart from being aligned with the theoretical model that the therapists used) strongly influenced clients, who responded by talking about the proposed topic as they continued the conversation. Thus, dialogues during solution-focused treatments (de Shazer, 1985) were about client improvement and goals, while the dialogue in cognitive-behavioral sessions (Beck, Rush, Shaw, & Emery, 1979) was about the client's problems and

difficulties. The therapist can, therefore, lead conversations through the topic, questions and comments that he/she chooses during the dialogue.

In 2013, researchers Ruiz-Sancho, Froján-Parja and Calero-Elvira also used sequential analyses (Bakeman & Quera, 2011) and their language-coding instrument (Froján-Parga et al., 2008; Ruiz-Sancho, Froján-Parga, & Calero-Elvira, 2013) to show the existence of interactional patterns between client and therapist language.

Their research focused on the therapist's response to the client, who manifested his or her condition by either saying something pro-therapeutic (i.e. the client verbalizes his/her well-being, having achieved a therapeutic objective, or expresses adherence to the therapist's instructions) or anti-therapeutic (the client verbalizes the opposite). In this way, therapists tended to show agreement, (called approval in their categories system: "good"; "right"; "excellent!") when the former occurred, and showed disagreement when the latter occurred (e.g. "no, that's not true"; "I can't believe it"; "no, that's not like that"; "that doubtful 'yes' does not help me").

In addition to this ability to guide or change the conversation, therapists also propose changes of meaning, and the more accurate and precise these are when treating the client's main narrative (i.e. the way in which they understand the problem and/or the reason for their consultation), the better the predicted clinical outcomes (Crits-Christoph, Gibbons, Temes, Elkin, & Gallop, 2010). Interestingly, these results only appeared among interpersonal therapists, with an inverse result (the more precise the changes of meaning, the worse the predicted results) in cognitive therapists. As the authors themselves pointed out as part of their limitations, precision in the topics to be treated does not seem to be the only important factor when introducing meanings. In this regard, Cunha et al., (2012) found that only certain linguistic interventions by therapists tended to precede or concur with certain client verbalizations of improvement, called innovative moments in their study.

The client, as noted above, is not a passive element in the conversation and, on occasion, rejects these linguistic interventions aimed at finding improvements or causing changes. Ekberg and LeCouteur (2015) stated that these disagreements were more likely in interactions where the client was advised to modify some aspect of his or her life, due to the asymmetric relationship generated by counseling (the therapist advises the client on the basis of knowing more about the topic). Thus, clients tended to reject the therapist's advice alluding to aspects of their life and information that only they could know about. For example, clients can reject the proposal by saying that the therapist lacks relevant information, or that they have tried it before and it did not work (Ekberg & LeCouteur, 2015).

The therapist's use of language becomes crucial in handling these disagreements, as they may put the therapeutic relationship at risk. When a disagreement is generated, after a formulation that introduces new information, or a comment the client does not agree with, therapists tend to perform maneuvers to reestablish agreement, by being more conservative and accepting the client's disagreement. In other words, by agreeing to the client's proposal (Muntigl & Horvath, 2014). One of the maneuvers used by therapists to prevent the relationship from worsening at such times is to combine confronting the client with validating their perception of the world (Weiste, 2015).

Another possible maneuver that therapists perform is to restructure their language: When an optimistic presupposition of improvement has not been accepted, therapists restructure questions by introducing exact words that their clients have previously said to make them more acceptable (MacMartin, 2010). Peräkylä (2011) observed that the same process occurs when psychoanalytic therapists modified and adapted their interpretations based on how the client had responded, making them easier to accept by the client, or when they simply modified them to provide perspectives previously expressed by the client.

This interactivity observed between therapist-client and client-therapist (or, if preferred, in sequences of three: therapist-client-therapist), where the intention is to maintain a good relationship while therapeutic work is carried out, has received the name of *responsiveness*[2] (Stiles, Honos-Webb, & Surko, 1998). The authors claim (Stiles et al., 1998) that any characteristic of therapists or clients is part of their interaction during the interview, which implies a dynamic relationship between variables, bidirectional causality and feedback cycles.

2. This phenomenon was called *adjustment* ir our research group. I will use the term as a synonym for responsiveness

This has also been identified as one of the main problems for the study of psychotherapeutic processes and for the process-outcome relationship, as most of the studies conducted have not taken into account the interactivity condition, since most results and conclusions in the area are made using linear reasoning (Kramer & Stiles, 2015; Krause & Lutz, 2009; Stiles, 1988, 2009). By contrast, the study of adjustment could help to explain differences in effectiveness found among therapists that had no explanation until now; these differences could be justified by how good or bad they are at adjusting to the client's needs (Stiles & Horvath, 2017). This ongoing process of adjustment would therefore explain such differences, rather than a specific characteristic isolated from the interaction. Adjustments in the use of language (the choice of words, formulations or questions), in techniques (carried out through language), in the moment they are made, or in how to modify them, is part of the linguistic interaction as well as being its result, having calibrated the information (arrived at a mutual understanding). If, as suggested at the beginning of the chapter, psychotherapy is a spoken profession, its study should ultimately allow for the observation and study of these adjustment processes.

Starting a linguistic interaction generates a relationship (or, conversely, having a relationship with someone implies information exchange, if we stick to Clark's collaborative model, 1996). So, theoretically, an adjusted process could also be behind a good therapeutic relationship (the result of that process). The evaluation of the therapeutic relationship is an evaluation of the adjustment, or if preferred, it is a still image at a given moment of an interactional, linguistic process (Kramer & Stiles, 2015, p. 280). Therefore, the proposal made here is that the adjustment observed in therapy is one more manifestation of the interactive nature of language, such that both constructs can be taken as synonyms. This interactivity is recursive, meaning that if the interaction at the most microscopic level (language) is functional, at higher levels (decisions regarding techniques and treatment) it will be too (Stiles et al., 1998). For example, if the treatment was successful, it was because the appropriate interventions were chosen to help the client. These interventions were successful because they were developed through adjustments, that is, the therapist considered what the client was saying, handled the disagreements to adapt to the client's understanding of the world and carried out strategies to gradually understand

what they were talking about (calibration).

Hence, and as an extension of the suggestion described in Chapter 0, I will propose that a study of the process taking place in psychotherapy can be carried out by examining the linguistic interaction between therapist and client. This linguistic interaction could be modified by characteristics in the client or the therapist. In our case, the following chapter will provide a review of the study characteristic chosen in this doctoral thesis: the therapist's experience.

Summary box 2

The psychotherapeutic context has certain characteristics that differentiate it from everyday face-to-face dialogue. On one hand, there is an asymmetry in the information initially known by each participant, and on the other hand, there is an intentional use of language by at least one of the parties.

The asymmetry of knowledge refers to the therapist having theoretical knowledge that indicates what a problem is and how to solve it, how to understand the person and what aspects the treatment should focus on. This knowledge, furthermore, does not need to be made explicit to the client in order to help him. The person who comes to therapy session, on the other hand, has an autobiographical knowledge that is only accessible in therapy session through what he/she expresses. From the client's point of view, the dialogue that he/she engages in with the therapist would more closely resemble a normal, everyday dialogue, with the exceptions of confidentiality and the complexity of the matter being treated.

The intentional use of language refers to the fact that, in the case of the therapist, that theoretical knowledge causes him to modify some basic aspects of language such as the way in which he/she asks questions and the way in which he/she constructs formulations in response to the client's content, highlighting certain aspects, ignoring others, doing so frequently or barely speaking. Along with this, the assumptions the therapist makes during therapy sessions may have different origins, but the particularly prominent ones will be those influenced by the person's vision, the problem and the solutions proposed in their theoretical work model (Rodríguez-Morejón, 2018). From the client's perspective, again there are no major alterations, and their use of language is not intentional (they do not consciously modify it, nor do they predetermine or deliberately choose what they say or when to keep silent), although their presuppositions about their life and their problems may, or may not be, content of the treatment as these reflect their way of understanding the world.

Chapter 2: Experience

This chapter reviews the variable used to group together participants in the doctoral thesis: experience. To do so, relevant definitions of the variable are reviewed and, subsequently, comparative studies that use experience as a grouping variable are detailed.

Definitions of Experience in Psychotherapy

The most likely response that can be expected from an expert in any subject (including psychotherapy) when asked about his or her expertise is: "I've been doing this for many years." However, an intuitive explanation where "*expert = practice x time*" can oversimplify the phenomenon. There are authors who claim this formula should be much more specific and even limited by subject

or profession (Kahneman & Klein, 2009; Miller et al., 2018; Rønnestad, 2016; Shanteau, 1992; Shanteau & Weiss, 2014; Weiss & Shanteau, 2014). In psychotherapy, the investigation of experience, in addition to clinical performance, is usually also related to training. Thus, experts are also educators who teach and supervise new psychotherapists; they are the teaching method for this profession, teaching what should or should not be done in therapy session (O'Shaughnessy, Du, & Davis, 2017).

In his analysis of different professions, Shanteau (1992) characterizes psychotherapy as one of the disciplines in which it is most difficult to establish differences between experts and trainees in terms of performance. His suggestion is that expertise depends on the characteristics of each profession. For example, it is difficult to develop high levels of expertise in tasks that involve making decisions in contexts where information is constantly changing, where you need to make decisions in situ and without feedback, based on someone else's behavior. This would perfectly describe the task a psychotherapist faces.

In a subsequent conceptualization (Shanteau & Weiss, 2014), expertise is understood as a continuum, dependent on the specific task to be performed. A person can be an expert in a specific task and perform poorly in another. It might even be that he/she performs poorly in absolute terms. That is, the expert could be capable of successfully predicting a phenomenon only 10% of the time. For example, predicting 10% of the time which couples will break up by observing how they argue.

It is no longer a question of being an expert or not, but of establishing in which specific topics you have expertise. This relativistic conceptualization is not exempt from criticism: as it is a broad and flexible definition, it could lead to "almost all therapists could claim to be an expert based on some specific aspect" (Goodyear et al., 2017, p. 61). However, it also provides a new way of investigating experience. For example, a therapist could be very good at formulating cases, but might not exceed a trainee's level when it comes to maintaining a real interaction with a client in therapy session. Norcross and Karpiak (2017) argue that two types of expertise can be distinguished in psychotherapy: experts at psychotherapy who demonstrate their expertise with their effectiveness in

therapy, and experts on psychotherapy who demonstrate their expertise with their knowledge, reputation or credentials, without the need for therapy. The conclusion is that studies should focus on investigating specific aspects and not the "totality" of the profession (Shanteau & Weiss, 2014; Weiss & Shanteau, 2014).

Tracey et al. (2014) accept and develop Shanteau's (1992) proposal for psychotherapy: expertise does not seem to be simply the result of accumulating years of experience. As Shanteau (1992) did with professions in general, Tracey et al. (2014) describe certain specific factors of psychotherapy that prevent the achievement of expertise. These factors can be related as follows:

- Again, the lack of feedback on performance appears as a main reason for not obtaining expertise
- Probably because they lack that evaluation, therapists tend to self-assess their competence inexactly, tending to see themselves as exceptional professionals
- This overestimation of skills without external evaluation prevent psychotherapists from developing deliberate practice (understood as a specific task that is undertaken with the goal of learning or improving aspects of their expertise)
- Lastly, and as a result of years of experience without feedback, therapists might develop cognitive biases that do not necessarily make them better in their clinical practice.

Therefore, Tracey et al. (2014) propose that psychotherapists may have expertise if they dedicate time (i.e. accumulate experience) and if the right conditions exist (for example, if they get feedback on their work, if they perform deliberate practice, etc.).

Years later, the same authors suggested that expertise in psychotherapy should also be related to effectiveness in therapy (Goodyear et al., 2017; Tracey, Wampold, Goodyear, & Lichtenberg, 2015). This proposal entails operationalizing the “expertise” variable as a black box construct (i.e. what they do to obtain good results is unimportant, only the *input* and *output* variables matter).

Despite the interest this description may generate among institutions, insurers, clients, and ultimately, any potential psychotherapy user, the central question regarding how expertise can develop in consultation remains unanswered (Rønnestad, 2016). In addition, it

may imply a new problem: finding a definition that all models agree upon for what can be considered "good outcomes", as well as an instrument that can be used systematically and transversally to easily compare results.

The main problem in the study of expertise, experience and the expert in psychotherapy lies in the complexity of the description, in the relationship between definitions and nearby variables and, ultimately, in defining limits for the subject of study.

The largest study conducted to date to examine the perception of psychotherapists of their own work and their professional development found that 81% of respondents (from a total of 4,733 therapists from more than five countries) described that they had experienced improvement in their work over time, with 42% of the sample believing they had overcome previous professional limitations thanks to their experience (Orlinsky & Rønnestad, 2005).

Focusing on relational skills (i.e. the ability to interact, hold a conversation), therapists did not perceive improvement or deterioration over time. By contrast, they did perceive a slight improvement in their technical skills

(model techniques, process decisions). Along with this improvement in techniques, the results obtained by Hill et al. (2015) highlighted that therapists felt more effective, authentic and aware thanks to training and over time.

By asking reputable psychotherapists how they developed their work in psychotherapy, they responded by referring to aspects of self-knowledge, their personal abilities such as intelligence (social and emotional) and the ability to help clients to manage uncertainty, without standardizing procedures (Levitt & Piazza-Bonin, 2016). The fact that stands out is that professionals themselves did not refer to effectiveness as a criterion of their own work, but rather to a combination of cognitive aspects, experiences and how they carry out the task.

Hill et al. (2017) agree that these two criteria (task performance and cognitive processing) are the two most relevant in assessing differences between experts and non-experts, with performance being the core variable for expertise. They suggest this variable should be measured by the client or by external observers, taking into account three aspects: a) the ability to generate relationships with clients; b) the ability to put the techniques of their model to practice and c) the ability to balance the use of relational

skills (those responsible for generating a cordial conversation) and technical skills (those specific to each model) in the interaction with the client (Hill et al., 2017, p. 11). On the other hand, the study of cognitive processing in therapists is conducted in analogous studies where therapists are exposed to stimuli related to therapy and perform tasks of processing, organizing, retrieving previous information and making decisions.

Considering the criteria outlined, the following section will review evidence to date on experience and expertise, organizing the analysis whenever possible based on the two main criteria proposed in Hill et al. (2017): task performance and information processing. Along with these two, studies that focus on investigating differences in effectiveness based on experience will also be reviewed, as proposed by Tracey et al. (2014; 2015) and Goodyear et al. (2017).

Differences Found in Effectiveness Based on Experience

As explained above, establishing a relationship between more experience and greater expertise seems common sense. However, studies in naturalistic settings

do not support this idea. Experience does not guarantee expertise, nor, ultimately, a therapist's effectiveness (Okiishi et al., 2006; Okiishi, Lambert, Nielsen, & Ogles, 2003; Wampold & Brown, 2005). Despite being studies with large samples (6,499 clients and 71 therapists; 1,779 clients and 56 therapists; 6,146 clients and 581 therapists, respectively), none of the variables studied (years of experience, type of training, gender, age, theoretical orientation) could explain the good outcomes. The fact that experience does not predict better results implies that some therapists with little experience (among those taking part in these studies) are equal, better and worse than experienced therapists in terms of performance.

The research hitherto reviewed is cross-sectional, i.e. when experts are compared with trainees, other aspects that would be difficult to control like personal and professional variables (e.g. language skills, personality, intelligence) could also be compared. Longitudinal studies are used to overcome this difficulty, where therapists are monitored to verify the effect that experience has on their capabilities over time.

After following 170 therapists who worked with 6,591 clients for an average period of five years (up to 17 years),

a general trend of slight decrease in effectiveness was found, where psychotherapists with the most experience obtained poorer results (Goldberg et al., 2016). Using the same database as reference, but focusing the longitudinal study of formative phases, Erekson, Janis, Bailey, Cattani and Pedersen (2017) observed the same trend, finding that effectiveness over time had not changed or was slightly worse. Hill et al. (2015) obtained similar results in terms of the relationship between training (two to three years of training) and the effectiveness of therapists, detecting that effectiveness tended to decline, or finding a null relationship between training and scales of outcomes. On the other hand, the study conducted by Owen, Wampold, Kopta, Rousmaniere and Miller (2016) in formative contexts found that therapists improve with time (in the study, the average follow-up time was approximately four years), although this improvement was also subject to the severity of the patient's condition, meaning that novice therapists only demonstrated improvement with experience in cases where the problem clients presented was less severe.

Lastly, the most recent meta-analysis found that research into the relationship between experience and

effectiveness (Walsh, Roddy, Scott, Lewis, & Jensen-Doss, 2018) indicates the existence of a moderately positive relationship between both variables in the treatment of internalized disorders (e.g. anxiety, depression, post-traumatic stress disorder and obsessive compulsive disorder). However, the authors point out as part of their limitations that less than half of the articles were randomized. In addition, the study did not verify the quality of the research included with standardized criteria, so these results should be treated with caution.

Differences in Performance Based on Experience

Studies of language use do seem to find differences between the performance of expert therapists and novices. For example, a descriptive study found that language used by expert therapists was morphologically different from that used by novice therapists (Froján-Parga, Ruiz-Sancho, & Montaño-Fidalgo, 2011). In the nine sessions researched, novice therapists performed more interventions, asking, validating what the client said, and performing interventions such as meta-communications and self-revelations, or were interrupted by the client. On the other hand, expert therapists used language more

often to give hope, offer clients explanations about what they were experiencing, and evoke emotional situations in the client.

The same research group (Vargas-de la Cruz, Pardo-Cebrián, Martínez Sánchez, & Froján-Parga, 2018) also found that expert therapists verbalized more rules (i.e. explicit relationships between behaviors, contexts and consequences) throughout the treatment compared to novice therapists. Lastly, this group was also interested in the use of instructions (i.e. indications given by therapists for tasks to be performed outside the session) based on experience, finding that expert therapists communicated more direct instructions, formulated in the second person ("You have to do/ do this task because…"), while the novice therapist communicated instructions in the second person, but as suggestions and about specific behaviors ("will you remember to practice thought-stopping every time…?") (Marchena-Giráldez, Calero-Elvira, & Galván-Domínguez, 2013).

All these results should be taken as preliminary studies, since, as the authors point out in their three studies (Froján-Parga et al., 2011; Marchena-Giráldez et al., 2013; Vargas-de la Cruz et al., 2018), sample sizes and

Summary box 3

Summarizing the evidence presented so far is not an easy task. On one hand, experience seems to impair the effectiveness of therapists. However, when comparing expert and novel therapists, cross-sectional studies do not find differences. Along with this, the results of the meta-analyses are also inconclusive: while the meta-analysis presented does indicate that greater experience goes hand-in-hand with greater effectiveness, the same authors (Walsh et al., 2018) indicate that other previous meta-analyses yielded results indicating that greater experience brings about less effectiveness (Hattie, Sharpley, & Rogers, 1984; Weisz, Han, & Granger, 1995), or that the two variables are not related (Berman & Norton, 1985). Something that all these studies do have in common is that they have not investigated process variables. For example, the two longitudinal studies carried out in training phases do not explain how training is carried out, so they could be comparing, to name a few possibilities, three years of readings with three years of practice, simulated cases with real cases, modeling with feedback or any other formative alternative (Hill & Lent, 2006; Lane & Rollnick, 2007). In order to better understand the relationship between experience and effectiveness, we would need to study process variables that allow us to examine how experience influences the execution of a therapist's activity.

the descriptive nature of the research do not allow the generalization of the results. The differences found could be due to the therapist's experience, but also to differences between clients (their problems, their adherence to the treatment, etc.) or to the idiosyncrasy of each therapist (e.g. he/she could be more authoritative because of some personality trait, and not because of his/her experience) or they could be caused by the precise moment of evaluation. It should also be noted that none of the studies reviewed compared the level of responsiveness based on experience, nor did they perform analyses that provide insight into the therapist-client interaction.

Taken as a whole, the results of these three studies could indicate a tendency for expert therapists to perform more interventions that include:

- new information (when making suggestions, changing meanings)
- encouraging comments for the client
- explanations regarding how the client's problem works, describing the relationships between the client's behaviors and his or her context

- greater authority, making direct requests to the client about the tasks to be performed out of session.

Differences Found in Information Processing Based on Experience

As far as cognitive tasks are concerned, available research again displays contradictions. Eells, Lombart, Kendjelic, Turner and Lucas (2005) compared the quality of case formulations made by *novice therapists* (with less than 1,000 hours of supervised practice), *experienced therapists* (with more than 10 years of experience) and *expert therapists* (with more than 10 years of experience and recognition through publications, manuals or workshops). As expected, expert therapists obtained the best marks for case formulations. However, ratings were better for novices than for experienced therapists. This discovery may be connected, as suggested by the authors, to an overestimation of one's own capabilities by experienced therapists. Experts would presumably stay in closer contact with theoretical concepts, by writing and teaching about them, and novices, by learning them. The same sample allowed the authors to ascertain that the reasoning of expert therapists consisted mainly of inductive inferences (from data to theory), rather than

deductive inferences. Moreover, they always handled more data than all other groups in articulating their case formulations, although again, experts and novices showed similarities, with both groups presenting a similar frequency in their use of inferential and deductive reasoning (Eells et al., 2011). Kim and Ahn (2002; replicated in Flores, Cobos, López, & Godoy, 2014) found the same similarities between experts and novices as they studied causal biases (i.e. use of idiosyncratic theories that establish a causal relationship between elements). They discovered no differences between experts and novices when making a diagnosis using the fourth edition of the DSM diagnostic manual (American Psychiatry Association, 1994): either group was influenced by its own biases, and there was no change in this respect based on experience. Despite this similarity, when comparing psychotherapists who are already exercising their profession with first-year psychology students and master's students, the latter performed the best diagnoses in experimental tasks, with no differences found between first-year students and active psychotherapists (Witteman, Weiss, & Metzmacher, 2012). It seems that mere "clinical" psychotherapists, that is, those who neither teach or are being trained, tend to generate certain

biases or personal visions with experience that do not benefit them in experimental tasks such as those reviewed so far, such that novices (professionals who are in their first years of work) generally obtain better results in experimental tasks of diagnosis, case conceptualization or treatment planning (Vollmer, Spada, Caspar, & Burri, 2013).

Ultimately, existing evidence in this regard thanks to meta-analyses indicates that experience does produce a small improvement (d = .146) in clinical trial tasks such as diagnosis or decision making regarding the treatment to be applied (Spengler & Pilipis, 2015).

In summary, it seems that studies that investigate the effect of experience using information processing as a criterion also found contradictory results. Theoretically, experts should have internalized the different theories and clinical knowledge over time and after treating many people in therapy session, and they should be able to use that knowledge quickly, flexibly and intuitively (Betan & Binder, 2010). However, this process of internalization and intuitive responses could also be encouraging the appearance of biases that, if they work well are described as the expert's own thinking, but if they fail are identified

as cognitive biases (Anchin & Singer, 2016). Results for novices and experts would therefore tend to be similar in these cognitive tasks, as both groups make mistakes: foreseeable mistakes caused by inexperience, and those caused by biases acquired through experience, respectively.

The similarity in the results could also be caused by the fact that both experience groups have successes or obtain good results. To develop this possible explanation, let us briefly review the *dual perspective of cognitive processing* (Anchin & Singer, 2016; Kahneman, 2011).

According to this theoretical positioning, experience should cause certain cognitive operations to progress from a slow, conscious, controlled and rules-based processing system (neutrally called *system 2*), to an automatic, intuitive, fast and effortless processing system (called *system 1*) (Kahneman, 2011). Experts would only resort to system 2 when they needed to analytically confirm if their fast processing was successful.

In this vein, a possible explanation for the fact that no differences are found in studies that examine processing could be that, despite this migration to the so-called

(intuitive) system 1 that expert therapists theoretically perform (and that would lead to the appearance of cognitive and heuristic biases to process information), novices would still process information using system 2, which involves making a conscious effort or reflection to perform experimental tasks. Results could be identical even if different processing paths were used.

Another possible explanation for these results is that, in some professionals, experience provides a context that facilitates their development and improvement, while the same is not the case for others. The "experience" variable would thus be acting as a covariate of other contextual variables that may occur naturally, such as expert therapists performing deliberate practice during their work, continuous training, continuous supervision or other aspects that could generate improvements and the acquisition of expertise.

The contradictory results could be indicating that research is not analyzing the key variables related to experience, or that the methods used do not allow us to understand the phenomenon. Another possibility is that the training methods used for new psychotherapists are yielding results; there need not be significant differences

when comparing well-trained novices with experts. After all, the idea of good training is to help the layman become an expert in the field.

Summary box 4

Describing what an expert is in psychotherapy is not an easy task. There is an open debate regarding the characteristics that should be included in such a description.

If the definition of expertise is based on the level of performance, studies indicate that there are indeed differences in the use of language. In general, however, data does not seem to support the idea that these differences lead to higher levels of therapeutic success. Moreover, by combining cross-sectional and longitudinal evidence of effectiveness, these microscopic differences could be causing worse results, or may not be generating any difference at all between experts and novices.

With regard to information processing, experts and novices present the same cognitive biases when processing certain relevant information in clinical contexts. These two groups also seem to have similar capabilities, with similarities sometimes being found between the novice and the most expert psychotherapist. In any case, experience could account for a small improvement in this type of cognitive tasks, according to the latest meta-analysis.

After reviewing the results with the three criteria and suggestions for the definition of experience and expertise, no description seems more accurate than the rest. The definition we have chosen to use will be described and justified in the following chapter.

PART TWO

Chapter 3: Justification

In the theoretical introduction, we stressed the importance of language in psychological therapy, as it is considered a fundamental part of the profession. This doctoral thesis argues that by investigating the dialogue between therapists and clients, as well as their interaction, we may come to understand the process of therapy (Stiles et al., 1998). Along with language, the experience variable has also been reviewed. The main reason for this study is to rethink the process of training psychotherapists. Training in psychotherapy consists of:

- The most experienced professionals or experts are the trainers of novice therapists.

- In that training, expert therapists teach trainees the theoretical aspects (how they should process information during the treatment) and practical aspects (how the interview is conducted, how to create a therapeutic relationship and implement the specific techniques of the various models).

From this approach, this work aims to understand the differences in the use of language (process) between novice and expert therapists, to make improvements in training procedures. Outcome studies comparing experts and novices offer conflicting conclusions and, most importantly, counterintuitive to the experience of expert therapists. Probably because of the latter, the variable is still being investigated. We therefore continue trying to understand results that show, for example, therapists whose performance worsens over time, or the fact that there are no differences in terms of effectiveness between experts and novices. Our approach to the study of process through an analysis of language provides a new way to try to understand the evidence of outcomes research.

Objectives

The general objective of this doctoral thesis is to research the use of language by therapists based on the experience variable. The specific objectives of the dissertation are specified in the three studies that make up this research:

1. The first objective is to develop a valid and reliable observational instrument to investigate language in psychotherapy (study 1). This instrument is concerned with the study of the psychotherapist-client interaction. In addition, since the ability to use language for different purposes (create a therapeutic relationship, change meanings and help regulate emotions or encourage new behaviors) is a transversal and basic therapeutic element common to most therapeutics models, the instrument is developed without any bias towards specific therapeutic theories.

2. The second objective is to analyze the language and interaction with clients used by novice and expert therapists.

a. A monadic analysis of the therapist's language will be carried out based on experience (study 2 and 3). These analyses involve comparing the therapist's language without considering the interaction with the client. They are performed as a first step to understand the structure of the data.

b. A sequential analysis of the therapist-client linguistic interaction will be carried out based on experience (study 2 and 3).

This study also presents the following secondary objectives:

1. Open a new line of research to examine the reasoning behind the use of language by therapists based on experience (study 3). Since a fundamental aspect of language in therapy session is its intentional use, this secondary objective aims to be a first step in its investigation.

2. Provide data that helps to better understand and explain prior results reviewed in light of the comparison between expert and novice therapists.

Chapter 4: General Method

This dissertation has a multi-method design. This means that the methodologies used in the studies that make up the doctoral thesis are designed to be complementary in order to overcome the limitations of each separate methodology (Anguera, Blanco-Villaseñor, Losada, Sánchez-Algarra, & Onwuegbuzie, 2018). The three studies share seven central aspects to facilitate the triangulation of data obtained.

These common aspects are:

1. Language is **observable** and is studied **objectively** while a record is made using standardized recording devices and procedures, such as transcripts (Mergenthaler & Stinson, 1992).

2. Another key aspect is that the language register is separate from the analysis, it has a **low level of abstraction**. This means that what happens (verbal behavior) is recorded, and later analyzed separately. Thanks to this, records (raw data) can be exploited and analyzed from different perspectives, or for more sophisticated analyses in the future. This is not the case, for example, when a more abstract construct is measured, such as emotional intelligence (where the record itself is the analysis of intelligence).

3. The continuous recording of language was divided into **speech turns**. These turns are the unit of analysis (i.e. the sample) of this research and are defined as: what the client says until the therapist speaks again and what the therapist says until the client speaks again. This includes all interjections used to maintain the conversation, such as "mmmh" or "alright".

4. The analysis is based on previously presented theoretical approaches where dialogue is collaborative and interactive (Bavelas et al., 2017; Clark, 1996). To support this approach statistically, whenever possible, **prospective lag-sequential analysis** (Bakeman & Quera, 2011) was carried out, as it was considered the most appropriate means to analyze behavioral patterns, that is, knowing the process (Escudero & Rogers, 2004).

5. To be able to **generalize** the results more easily, we have **controlled the client's variability** in this study, both in the observational studies and the experimental study. Different therapists have therefore interacted with the same client in each study. Since the interest lies in the differences between therapists' use of language, treating the client as constant allows us to control the possible alternative explanations related to the difficulty of the case, client idiosyncrasy, etc.

6. Another variable to consider in the variability of results is the theoretical model used by the therapists. To **control** this **variability**, only **systemic therapists** were examined in studies 2 and 3. The first study investigated therapists who used different models because it was relevant to the research objectives.

7. Since no consensus has been found on the most accurate definition of experience or expert, we have chosen a simple definition that facilitates grouping the participants through a questionnaire. Thus, in this study an **expert** is a person with more than ten years of

experience working continuously as a psychotherapist. In addition to that, they must also be trainers of new therapists. The definition of a **trainee** is a person who has two or less years of experience working continuously as a psychotherapist and who is in training at the time his performance is recorded.

Regarding language codifications, except in the first study where the research objective required the participation of more people, the rest have been carried out by the author of this doctoral thesis. To work with one encoder only, we decided to check the reliability of its encodings in comparison with a gold standard. The gold standard chosen was the coding sample performed in the intra-coder concordance test (described in section 1.1a). This procedure implies, as Bakeman and Quera (2011, p. 68) suggest, the existence of correct and objective coding. According to the authors (Bakeman & Quera, 2011, p. 167), an encoder was considered reliable if it obtained a .95 result in Cohen's kappa index. This data includes the total number of categories (20), their equiprobability (it was agreed that all categories could occur with the same probability), and the high accuracy sought in the encoder (95%).

Finally, regarding study chronology, the doctoral thesis began with the development and study of the psychometric characteristics of an observational instrument that allowed investigating the language of therapists (study 1). This study includes the gold standard test we have just referred to. In the second study, the first language analysis was performed comparing experts and novices. In this case, we analyzed a sample group obtained in training contexts that naturally combined novice and expert therapists with the same client (study 2). Since the main difficulty of the study is to generalize the data obtained from the linguistic interaction, the third and the last study were designed to resolve this limitation. That is why the design of the third study is an analogous experiment that allows novice and expert therapists to interact with the same client (study 3) (see Table 2).

In the following chapters, the methods of each of the studies will be presented in more detail, along with the results. The ethics committee of the University of Malaga approved the completion of these three studies (CEUMA: 14-2016-H).

Chapter 5: Method and Result of the Studies

Study 1: Development of the Therapeutic Language Coding System (SICOLENTE): Reliability and Construct Validity

Method

The objective of this study is to present the SICOLENTE instrument and describe its psychometric characteristics. To do this, two studies were carried out. Given that this is an observational instrument aimed at analyzing the psychotherapist-client dialogue, the fundamental psychometric characteristics to be investigated are the instrument's reliability (study 1a) and its construct validity (study 1b) (Poole & Hewes, 2016). This first study is published in PLoS ONE (Rodríguez-Morejón et al., 2018).

Table 2

Summary table of the studies that make up the doctoral thesis

Study	Design	Variable studied	Statistical analysis	Database
1	Observational	Instrument's reliability and construct validity	• Cohen's kappa and generalizability study • Chi-square and Z-test for two proportions	https://osf.io/dyuz2/
2	Observational	Language and interaction	• Chi-square and Z-test for two proportions • One-lag prospective sequential analysis	https://osf.io/vstxj/
3	Quasi-experimental	Language and interaction Intentional use of language	• Chi-square and Z-test for two proportions • One-lag prospective sequential analysis • Grounded Theory	https://osf.io/3jr2f/

The databases and coding manual can be accessed from the repository Open Science Framework (https://osf.io/dyuz2).

Creation of the Instrument

The observational instrument SICOLENTE was developed to fulfill the following four requirements: (a) analyze all verbal language present in a psychotherapy session, not only measuring the impact of a specific technique or a specific variable; (b) investigate the language of the therapist, the client and the interaction between them; (c) to be able to study therapists of any model, i.e. to respond not only to the theoretical assumptions of a particular model, but instead work towards a way of understanding communication in therapy that will be discussed later; and (d) enable external observers to apply this model to study the participants of the therapist-client interaction.

For the design of the instrument, we worked on combining up-down and bottom-up strategies. The up-down strategy is based on a simple model that understands psychotherapy as an interactional process between a therapist and a client (Rodríguez-Morejón, 2004). The therapist is trained using a model that adopts a series of theoretical assumptions: a way of understanding the human being, a theory that explains why people have problems, and a vision about what should be done so that problems can be solved. These theoretical assumptions are translated into practice in a series of procedures: two basic types of skills (creating a therapeutic relationship and promoting changes in meanings) and a varied repertoire of techniques. The theoretical assumptions vary substantially between models and each approach has its own set of techniques. Moreover, the basic linguistic abilities needed to create a relationship or work with meanings can be very similar between approaches, as they are central aspects of language use (e.g. formulations, presuppositions, questions, mutual understanding). From this perspective, therapy is a conversation for change in which the clients are the protagonists: they are the experts in their problems and have their own theories about why they exist and how they can be resolved (Rodríguez-Morejón, 2016). Therefore, the ability of the therapist to adjust the treatment to the person is understood as being key in the process (Stiles et al., 1998; Stiles & Horvath, 2017) and one of the aspects that should be measured by the

SICOLENTE instrument through language analysis. To implement the bottom-up strategy, we worked from an inductive approach in two phases. Firstly, a group of four expert clinicians made non-systematic observations of sessions of five different psychotherapy models to have an overview of the therapeutic process. The second phase began by recording a session in which two experienced therapists (a cognitive-behavioral and a systemic therapist) created an initial treatment session with a simulated client. The sessions were analyzed by twenty people with three distinct training levels: eight psychology students without knowledge of psychotherapy, seven doctoral students in psychology, and five clinical psychologists of different therapeutic orientations. Everyone is asked two questions: 1.What therapeutic elements can be identified in the session? 2. What does the therapist do to try to bring about changes in the client? From their answers, the first ideas emerged for building the system.

From there, a team of six professionals began to propose dimensions and categories, and through an iterative process of evaluating psychotherapy sessions, they obtained the final structure. In addition, a coding

manual was developed with category examples and counterexamples, as well as the coding process (the complete manual can be found at https://osf.io/dyuz2).

The "language" construct that measures the final instrument consists of three dimensions (a) Conversational Act, (b) Therapeutic Topic and (c) Content, which correspond to the three classic dimensions of semiotics: pragmatics, semantics, and syntax, respectively. Each dimension has several categories, which are mutually exclusive and exhaustive (See Table 3):

The first dimension, ***Conversational Act***, asks, "What are the psychotherapist and the client doing?" This dimension encompasses the aspect of language pragmatics and is the only dimension with different codes for psychotherapist and client. The therapists' categories distinguish between whether they are asking or commenting and if they are using the client's information and meanings (information that both share because the client has said it as client's demographic information, his/her problem, etc.) or introducing new information (e.g. interpretations, cognitive restructuring, metaphors, in short, new presuppositions, etc.). Regarding the client, the categories indicate when they accept and continue the

therapist's approach or reject the therapist's intervention.

The second dimension, ***Therapeutic Topic***, asks "What are they talking about?" This evaluates the topic and locates it in time (e.g., a good topic in the future is a goal, whilst a problem can be in the past, present, or future). This dimension is included within semantics, the meaning (to the participants) of what is expressed in the dialogue.

Finally, the ***Content*** dimension asks, "What action or user status is being referred to in the language?" To answer, it focuses on whether the verb includes an observable action or not, whether it can be intentional or not, and whether it is related to any person other than the client. Since answering this dimension required the coding process focus on the verb used, this dimension is included as syntax analysis.

To demonstrate how the instrument is used, an excerpt from Rogers and Gloria's coding of *Three Approaches to Psychotherapy* recording (study 1b) is presented:

Table 3

Dimensions and categories of SICOLENTE

Conversational Act	Therapeutic Topic	Content
Exploration (E)	Improvement (I)	Behavior (B)
Support (S)	Problem (P)	Thought (T)
New information (N)	Goal (G)	Emotion (E)
Exploration introducing new information (I)	Rules (R)	Physiology (P)
Comment (C)	Neutral (N)	Relationship (R)
Follow (F)	Mixed (X)	Mixed (X)
Reject (R)		Unspecific (U)

Note. Complete definitions of instrument categories can be found in the manual, published in Spanish and English at the online repository Open Science Framework (https://osf.io/dyuz2/)

> *(1) T: [...] I'd be glad to know whatever concerns you.*
>
> Codification: Exploration; Problem; Thought
>
> *(2) C: Well, right now I'm nervous*
>
> Codification: Follow; Problem; Emotion
>
> *(3) T: Mhm*
>
> Codification: Support; Neutral; Unspecific
>
> *(4) C: But I feel more comfortable the way you are talking in*

a low voice and I don't feel like you'll be so harsh on me. But, ah...

Codification: Follow; Improvement; Emotion

(5) T: I hear the tremor in your voice, so I know you are...

Codification: New information; Problem; Physiology

On turn (1), Roger's performance is encoded as *Exploration* in the first dimension since the therapist looks for client information. In the second dimension (1) this is codified as a *Problem* when referring to the action of what concerns you, i.e. what bothers the client. Finally, *Thought* is encoded in the third dimension since this is content over which control can be exercised but is not observable (in this case a concern). Gloria's turn (2) begins with *Follow* in the first dimension as she responds and follows the conversation. In the second dimension (2) this is coded as *Problem* since it refers to the client's nerves when responding to "[...] whatever concerns you". Finally, the third dimension is encoded as *Emotion* to be a sensation. In relation to turn (3), this is a back-channel, and is encoded as *Support*, since it does not provide any information, *Neutral* since it does not imply any aspect of the relevant therapy, and *Unspecific* because it does not refer to any state or action by Gloria. In turn (4), Gloria continues speaking so in the first dimension this is encoded as *Follow*, and in the second dimension this is encoded as *Improvement* since Gloria uses an adversary with respect to what she said previously and, in addition, the situation she expresses is positive (feeling comfortable). In the third dimension, this is still coded as *Emotion* since she is comfortable with how Roger speaks, generating a subordinate phrase so that only the content is understood. Finally, in (5) this is coded as *New information* because Roger adds meaning to her nerves by talking about the tremor and relates it to the former. In the second dimension, *Problem* is coded as it refers back to a negative aspect of Gloria's life. Finally, in the third dimension, it is coded as *Physiology* since the action or state of the client to which Roger refers is the tremor, an observable but uncontrollable action (such as crying or tachycardia).

Study 1a: Reliability

1.1a Participants

To investigate reliability, we analyzed three complete sessions from two therapists. The first therapist is a 60-

year-old male who works using a brief systemic therapy model that he himself manualized (Rodríguez-Arias & Venero, 2010). The model includes solution-focused therapy (SFT) (de Shazer, 1985) and the MRI strategic therapy (ST) (Fisch, Weakland, & Segal, 1982). At the time of data collection, the therapist had more than 30 years' experience, with the endorsements of the main associations of the country to be a teacher and psychotherapy supervisor. He carried out his work in a public health setting. The other therapist is a 48-year-old male who applied the cognitive-behavioral model in his work (Beck, Rush, Shaw, & Emery, 1979; Ellis & Ellis, 2011). He is a trainer at the University of Malaga and has more than 15 years of experience working as a therapist in a psychological care service of this university. These three sessions were chosen randomly from the naturalistic sample obtained to investigate the validity of the instrument. Thus, the sample consists of a first session conducted by the systemic therapist and the first and second session of a treatment program given by the cognitive-behavioral therapist. Both clients were women, aged 26 and 28, and both had anxiety disorders.

All participants (therapists and clients) took part voluntarily in the investigation after reading and signing the informed consent form.

1. 2a Procedure

Following the methodology proposed by Anguera (1990), the sample was transcribed, generating a total of 816 interventions codifiable by the instrument. To codify, two teams of three people were created with six coders that had previously studied the definitive manual of the instrument. In principle, each observer codifies the interventions separately and meets with the other two people on the team to agree on codes. The strategies that were followed to agree the final codes are (Anguera, 1990): (a) first, if two or three observers determine a code, it is accepted as a team code. If in the individual coding, the three judges codify an intervention in a different way, two possibilities are opened, (b) revision of the manual, to choose the most accurate code of the three; and if the disagreement has still not been resolved (c) more conservative codes are selected, preferably non-specific or neutral codes. The inter-observer reliability test was carried out by comparing the final data of each of the two teams.

To establish the intra-group agreement, the first team re-encoded approximately half of the conversational turns three weeks later (454), and the new data were compared with those obtained in the first coding by the same team.

1. 3a Analysis Plan

Regarding statistical analyses, inter and intra-coder reliability was calculated with the Cohen's kappa index (Cohen, 1960; Zhao, Liu, & Deng, 2013). To continue investigating reliability, analyses were conducted using the Theory of Generalizability, which is used to determine to what extent the accuracy or reliability of a measurement allows for generalizing the observations made to the set of all the observations of the field (Briesch, Swaminathan, Welsh, & Chafouleas, 2014; Cronbach, Gleser, Namda, & Rajaratnam, 1972), in this case, language in therapy. A generalizability study (G-study) was designed with two random crossed facets: Observers (O, two levels) and Categories (C, 20 levels). With the G-study, the effects of different sources of error are estimated and it is confirmed whether the highest percentage of variance is due to the observers or attributed to the categories of the instrument (Wasserman, Levy, & Loken, 2009).

Study 1b: Validity

Two different samples were used to conduct the construct validity study: *The Three Approaches to Psychotherapy* recording (henceforth TAP; Shostrom, 1965) and a clinical sample obtained in naturalistic settings. The TAP sample (described below) was chosen for several reasons: it is a recording widely used in this research field (Barbosa, Cunha, Santos, Gonçalves, & Salgado, 2017; Chen, 1981; Hill, Thames, & Rardin, 1979; Mercier & Johnson, 1984; Wickman & Campbell, 2003), and is easily accessible to any researcher, which facilitates the understanding and replicability of the present study. Secondly, since the three interviews with the same client were conducted by the creators of each of the models, the client can be considered a constant and the observed differences in interaction are due to the specific differences introduced by each model.

The clinical sample of naturalistic settings (described below) was selected because it is more representative of the final object of study in which the instrument will be used, that is, to provide greater external validity.

1. 1b Participants

The recording (Shostrom, 1965) presents a demonstration given by the therapists Carl Rogers, Fritz Perls, and Albert Ellis. This recording was made with the intention of obtaining a representative session of client-centered therapy (Rogers, 1951), gestalt therapy (Perls, 1969) and rational-emotive therapy (Ellis & Ellis, 2011). The three therapists interview the same person, Gloria, a 30-year-old woman who agreed to be recorded and interviewed. She came to the consultation regarding problems related to men, as well as difficulties in adapting to divorce and taking care of her young daughter.

The therapists that comprise the second sample are those that have already been described in the Participants section of study 1.a (reliability). 15 cases comprise the total sample obtained with the two therapists of which only the first and last sessions of each were investigated. This produced a total of 28 investigated sessions; 16 sessions of the systemic therapist (four successful and four failed treatments) and 12 sessions of the cognitive-behavioral therapist (four successful and three failed treatments). In all cases, these are individual sessions and the participants took part voluntarily in the investigation

after reading and signing the informed consent form at the beginning of treatment. The final sample consisted of 14 women and one man, with an age range of between 21 and 43 years, and an average age of 29 years. Of the sample, 40% had anxiety disorders, 40% had adaptive disorders and 20% had depressive disorders according to the DSM IV-TR diagnostic manual (American Psychiatry Association, 2000).

1. 2b Procedure

The three TAP sessions produced 702 speech turns. The speech was encoded directly using the original video recordings, and transcripts were only used to support video encoding. The language was coded using LINCE software (Gabín, Camerino, Anguera, & Castañer, 2012) configured with the SICOLENTE categories. Before this coding, the gold standard reliability test was performed (explained in chapter 4: General method).

The naturalistic sample was coded by one of the groups formed by the coders that worked on the reliability sample. These 28 sessions produced 7,008 speech turns. The recordings of this sample were transcribed and coded by hand.

Whilst the transcription and coding process was being carried out, the thesis supervisor and a second university professor, expert in psychological treatments, hypothesized[3] about the expected results depending on the theoretical model of each therapist, after consulting the summary of each of the theoretical models in a well-known psychotherapy manual (Corsini & Wedding, 2011). The hypotheses were constructed to describe the differences and similarities expected among the therapists in terms of the particular theoretical models they adopt.

1. 3b Analysis Plan

The hypotheses proposed can be observed in Table 4. The analyses conducted with the validity samples were: (a) comparison of proportions between pairs of therapists through Pearson chi-square (Rogers-Ellis; Perls-Ellis; Rogers-Perls; systemic therapist-cognitive behavioral therapist). For the test of comparison of specific proportions by codes (two sample Z-test), we chose to accept as significant results where Z values were $Z \leq \pm 1.96 = p < .05$.

3. At the time of elaborating the hypotheses, neither the doctoral student nor the supervisor knew about the Open Science Framework platform or the hypothesis pre-registration procedures made possible by said platform. It was an anonymous reviewer who offered us the idea that we would later implement in study 3.

Table 4

Hypotheses of construct validation

	Hypotheses
H1	the proportion of *Support* codes is higher in Rogers' sample than Ellis' sample
H2	the proportion of *Improvement* codes is higher in Rogers' sample than Ellis' sample
H3	the proportion of *Emotion* codes is higher in Rogers' sample than Ellis' sample
H4	the proportion of *Support* codes is higher in Perls' sample than Ellis' sample
H5	the proportion of *Improvement* codes is higher in Perls' sample than Ellis' sample
H6	the proportion of *Emotion* codes is higher in Perls' sample than Ellis' sample
H7	the proportion of *Support* codes is higher in Rogers' sample than Perls' sample
H8	the proportion of *New information* codes is higher in Perls' sample than Rogers' sample
H9	the proportion of *Exploration INI* codes is higher in Perls' sample than Rogers' sample
H10	the proportion of *New information* codes is higher in Ellis' sample than Rogers' sample
H11	the proportion of *Exploration* codes is higher in Ellis' sample than Rogers' sample
H12	the proportion of *Problem* codes is higher in Ellis' sample than Rogers' sample
H13	the proportion of *Thought* codes is higher in Ellis' sample than Rogers' sample
H14	the proportion of *New information* codes is equal in Ellis' sample and Perls' sample
H15	the proportion of *Thought* codes is higher in Ellis' sample than Perls' sample
H16	the proportion of *Support* codes is equal in the CBT sample and SFT sample
H17	the proportion of *New information* codes is higher in the SFT sample than the CBT sample
H18	the proportion of *Exploration* codes is higher in the CBT sample than the SFT sample
H19	the proportion of *Goals* codes is higher in the SFT sample than the CBT sample

Table 4 (continued)

Hypotheses	
H20	the proportion of *Improvements* codes is higher in the SFT sample than the CBT sample
H21	the proportion of *Problem* codes is higher in the CBT sample than the SFT sample
H22	the proportion of *Thought* codes is higher in the CBT sample than the SFT sample
H23	the proportion of *Behavior* codes is equal in the SFT sample and CBT sample
H24	the proportion of *Relationship* codes is higher in the SFT sample than the CBT sample

Note. Exploration INI: exploration introducing new information; CBT: cognitive-behavioral therapist; SFT: solution-focused therapist

Once the hypotheses were verified, sequential analyses were also performed. The first time, transitional probability was compared (i.e. the probability that a specific message of the speaker will be followed up by certain message from the addressee). For example, the therapist may be speaking about the client's improvements (Improvement code) and the sequential analyses calculate the proportion of times that the clients continue to talk about Improvement, or in what proportion they change the topic to Problems or Goals. Since the transitional probabilities in the sequential studies are expressed as percentages (Bakeman & Quera, 2011, p. 105), a two sample Z-test was again conducted. (Bakeman & Gottman, 1989, p. 190).

Results

Study 1a: Reliability

The analyses conducted were: (1) Cohen's kappa index to calculate the inter- and intra-coder agreement by category, and (2) generalizability study of data (G-study).

Inter- and intra-coder Agreement

These first results allow us to know how reproducible the encodings are.

The inter-coder agreement focuses on demonstrating that the two groups of three people observe the same phenomenon (the greater the agreement, the greater the objectivity in the codifications). The intra-coder agreement focuses on knowing the scores consistency through time, i.e. encodings one group made at a particular moment in time are compared with other new encodings made later and their judgement regarding therapist language is checked for consistency.

Results obtained using Cohen's kappa index indicate a high degree of concordance in the three dimensions of the SICOLENTE instrument for the inter-coder test (see Table 5).

In accordance with Bakeman and Quera's proposal (2011, p.64, p.166), the results obtained by the evaluators in the inter-coder agreement was 95% observer accuracy for the Conversational Act and 90% observer accuracy for the Therapeutic Topic and Content. Following the criterion of Landis and Koch (1977) for using the Cohen's kappa statistic, all the results obtained by the coding team could be considered *almost perfect*. Similarly, using the criterion proposed by Fleiss (1981) the indices obtained would fall into the category of *excellent*.

Regarding agreements by category, it was found that the lowest agreements were obtained for the *Improvement*, *Mixed* (k = .77) and *Behavior* categories (k = .79) with the strongest agreements being for the *Follow* (k = .99), *Support* (k = .95), *New information* (k = .91) and *Physiology* (k = 1) categories.

Finally, the data from the intra-coder agreement test again show a high degree of agreement in the three dimensions of the SICOLENTE (see Table 6). These data reflect the consistency of the encodings, as well as the efficiency of the coding training process.

Table 5

Inter-coder results of the Conversational Act, Therapeutic Topic and Content dimensions: Code frequencies of each group of coders and Cohen's kappa agreement

	Group two								
Group one	E	S	N	I	C	F	R	**Total**	**Individual kappa**
Exploration (E)	127	1	0	11	0	0	0	139	.90
Support (S)	1	135	3	1	0	0	0	140	.95
New information (N)	0	6	84	0	2	0	0	92	.91
Exploration INI (I)	8	0	0	43	0	0	0	51	.80
Comment (C)	2	0	4	0	21	0	0	27	.83
Follow (F)	0	0	0	0	0	348	2	350	.99
Reject (R)	0	0	0	0	0	4	13	17	.81
Total	138	142	91	55	23	352	15	816	
	Cohen's kappa = .925								

	Group two							
Group one	I	P	G	X	N	R	**Total**	**Individual kappa**
Improvement (I)	53	3	2	2	6	0	66	.77
Problem (P)	1	179	1	6	17	0	204	.89
Goal (G)	0	0	138	1	7	1	147	.89
Mixed (X)	0	3	1	26	1	0	31	.77
Neutral (N)	14	3	13	1	304	2	337	.83
Rules (R)	0	0	1	0	2	28	31	.90
Total	68	188	156	36	337	31	816	
	Cohen's kappa = .852							

Note. Exploration INI = exploration introducing new information.

Table 5 (continued)

	Group two								
Group one	B	T	E	P	R	X	U	**Total**	**Individual kappa**
Behavior (B)	58	2	0	0	2	3	4	69	.79
Thought (T)	3	136	1	0	2	6	7	155	.83
Emotion (E)	0	1	35	0	1	2	0	39	.87
Physiology (P)	0	0	0	5	0	0	0	5	1
Relationship (R)	0	4	0	0	108	0	4	116	.91
Mixed (X)	4	7	2	0	0	67	0	80	.82
Unspecific (U)	10	10	3	0	4	2	323	352	.89
Total	75	160	41	5	117	80	338	816	
	Cohen's kappa = .862								

Table 6

Intra-coder results of the Conversational Act, Therapeutic Topic and Content dimensions: Code frequencies of each group of coders and Cohen's kappa agreement

	Group two second time								
Group two first time	E	S	N	I	C	F	R	**Total**	**Individual kappa**
Exploration (E)	103	0	0	1	0	0	0	104	.96
Support (S)	0	67	3	0	0	0	0	70	.97
New information (N)	0	1	30	0	0	0	0	31	.93
Exploration INI (I)	5	0	0	29	0	0	0	34	.90
Comment (C)	0	0	0	0	11	0	0	11	1
Follow (F)	0	0	0	0	0	195	0	195	1
Reject (R)	0	0	0	0	0	0	9	9	1
Total	108	68	33	30	11	195	9	454	
	Cohen's kappa = .970								

Table 6 (continued)

	Group two second time							
Group two first time	I	P	G	X	N	R	**Total**	**Individual kappa**
Improvement (I)	31	1	0	0	2	0	34	.93
Problem (P)	0	158	0	2	4	1	165	.92
Goal (G)	0	0	34	0	0	0	34	.98
Mixed (X)	1	2	1	21	0	0	25	.87
Neutral (N)	0	6	0	0	177	0	183	.95
Rules (R)	0	0	0	0	0	13	31	.96
Total	32	167	35	23	183	14	454	
	Cohen's kappa = .936							

	Group two second time								
Group two first time	B	T	E	P	R	X	U	**Total**	**Individual kappa**
Behavior (B)	34	1	0	0	3	3	0	41	.86
Thought (T)	0	82	0	0	1	0	0	83	.95
Emotion (E)	0	0	22	0	0	1	2	25	.85
Physiology (P)	0	0	0	0	0	0	0	0	
Relationship (R)	1	1	3	0	99	0	0	104	.93
Mixed (X)	2	0	0	0	0	43	0	45	.93
Unspecific (U)	0	4	1	0	3	0	148	156	.95
Total	37	88	26	0	106	47	150	454	
	Cohen's kappa = .926								

Generalizability Study

After knowing that the scores were reliable, we investigated whether they were generalizable to other coding situations. The first generalizability study was designed to check the behavior of trained observers in relation to the categories through a two-facets crossed design (Observers/Categories, O/C). In the Generalizability Theory, a facet is each of the elements of the measurement situation that can change from one observation to another and, thus, modify the results (Blanco-Villaseñor, 1991).

Identification of the sources of variance indicates that most of the variability is associated with Categories (99.84%), being zero for the Observer facet and low for the residual facet (0.156%). The generalizability coefficients obtained were excellent (.00 and .00), confirming that the categories describe in a heterogeneous way (they are exhaustive and mutually excluding) the measured construct, in our case, language.

By inverting the design (Categories/Observers; C/O), emphasis is again placed on inter-observer reliability. The generalizability coefficients are again excellent (.99 and .99) demonstrating high reliability among the observers (see Table 7).

Table 7
Variance analysis: Two-facets crossed design

Facets	Sum of squares	df	Mean squares	Variance component	Standard errors	% of total variance
Categories	453626.6	19	23875.084	11928.674	3684.006	99.852
Observers	0	1	0	-0.887	0.274	0
Categories x Observers	337	19	17.737	17.737	5.474	0.148

Study 1b: Construct Validity of the Instrument

Both the hypotheses proposed, and the results obtained can be observed in Table 8. Each of the results obtained in the two samples investigated is explained below.

Table 8

Hypotheses and results for the proportion comparison between therapists

		Rogers		Ellis			
	Hypotheses	**%**	***f***	**%**	***f***	**Z**	
H1	the proportion of *Support* codes is higher in Rogers' sample than in Ellis' sample	73.8	127	24.1	14	-6.72*	✓
H2	the proportion of *Improvement* codes is higher in Rogers' sample than in Ellis' sample	2.9	5	0	0	-1.31	×
H3	the proportion of *Emotion* codes is higher in Rogers' sample than in Ellis' sample	12.8	22	1.7	1	-2.44*	✓
		Perls		**Ellis**			
		%	***f***	**%**	***f***	**Z**	
H4	the proportion of *Support* codes is higher in Perls' sample than in Ellis' sample	17.0	23	24.1	14	1.15	×
H5	the proportion of *Improvement* codes is higher in Perls' sample than in Ellis' sample	3.7	5	0	0	-1.48	×
H6	the proportion of *Emotion* codes is higher in Perls' sample than in Ellis' sample	6.7	9	1.7	1	-1.43	×
		Perls		**Rogers**			
		%	***f***	**%**	***f***	**Z**	
H7	the proportion of *Support* codes is higher in Rogers' sample than in Perls' sample	17.0	23	73.8	127	9.88*	✓
H8	the proportion of *New information* codes is higher in Perls' sample than in Rogers' sample	44.4	60	19.8	34	-4.64*	✓
H9	the proportion of *Exploration INI* codes is higher in Perls' sample than in Rogers' sample	21.5	29	2.9	5	-5.15*	✓
		Ellis		**Rogers**			
		%	***f***	**%**	***f***	**Z**	
H10	the proportion of *New information* codes is higher in Ellis' sample than in Rogers' sample	56.9	33	19.8	34	-5.38*	✓
H11	the proportion of *Exploration* codes is higher in Ellis' sample than in Rogers' sample	6.9	4	0.6	1	-2.84*	✓
H12	the proportion of Problem codes is higher in Ellis' sample than in Rogers' sample	51.7	30	30.8	53	-2.87*	✓
		Ellis		**Rogers**			
		%	***f***	**%**	***f***	**Z**	
H13	the proportion of *Thought* codes is higher in Ellis' sample than in Rogers' sample	27.6	16	8.1	14	-3.82*	✓
		Ellis		**Perls**			
		%	***f***	**%**	***f***	**Z**	
H14	the proportion of *New information* codes is equal in Ellis' sample and Perls' sample	53.9	33	44.4	60	1.59	✓
H15	the proportion of *Thought* codes is higher in Ellis' sample than in Perls' sample	27.6	16	5.9	8	-4.19*	✓
		CBT		**SFT**			
		%	***f***	**%**	***f***	**Z**	
H16	the proportion of *Support* codes is equal in the CBT sample and SFT sample	31.1	466	31.9	701	0.51	✓
H17	the proportion of *New information* codes is higher in the SFT sample than in CBT sample	20.1	301	33	725	8.60*	✓
H18	the proportion of *Exploration* codes is higher in the CBT sample than in SFT sample	36.9	553	19.4	427	-11.84*	✓
H19	the proportion of *Goals* codes is higher in the SFT sample than in CBT sample	6.3	95	12.3	270	6.01*	✓
H20	the proportion of *Improvements* codes is higher in the SFT sample than in CBT sample	7.9	118	16.2	357	7.41*	✓
H21	the proportion of *Problem* codes is higher in the CBT sample than in SFT sample	35.2	527	12.7	279	-16.26*	✓
H22	the proportion of *Thought* codes is higher in the CBT sample than in SFT sample	21	315	15.8	347	-4.05*	✓
H23	the proportion of *Behavior* codes is equal in the SFT sample and CBT sample	15.4	231	13.7	302	-1.45	✓
H24	the proportion of *Relationship* codes is higher in the SFT sample than in CBT sample	13.3	199	14.1	311	0.69	×

Note. ✓ = the hypothesis is accepted; × = the hypothesis is rejected; CBT = cognitive-behavioral therapy;
SFT = solution-focused therapy
* $Z \geq \pm 1.96 = p < .05$

Three Approaches to Psychotherapy

The analysis began by comparing the two humanistic therapists (Rogers and Perls) with the cognitive therapist (Ellis).

The fundamental strategy in humanistic therapies is that people feel validated (Conversational Act: *Support*). Humanists share the idea that people are in a constant process of self-realization or self-actualization and, to overcome their problems, they must release their resources (Therapeutic Topic: *Improvements*), with emotional content being the core aspect of the treatment (Content: Emotion).

The analyses confirm that Rogers showed significantly more *Support* codes than Ellis (H1: Z = -6.72, $p < .01$) and speaks more of emotions than the cognitive author (H3: Z = -2.44, $p < .05$). However, H2 cannot be accepted, since the *Improvement* code was not used more frequently by Rogers (H2: Z = -1.35).

In the case of Perls, none of the hypothesized differences were found: he does not show more *Support* than Ellis (H4: Z = 1.15), he does not talk about *Improvement* (H5: Z = -1.48), nor does he use emotional content more frequently (H6: Z = -1.43).

With respect to the theory, we expected to find differences in style between the two humanistic therapists. In particular, we anticipated that Rogers will focus on understanding and supporting, introducing very few new meanings, whilst the Gestalt therapist will introduce more new meanings in an attempt to favor the awareness of here-and-now (Conversational Act: *Support*, *New information, Exploration, introducing new information*). The analyses confirmed the proposed hypotheses: Rogers used the *Support* code significantly more (H7: Z = 9.88, $p < .01$) whilst Perls made more use of the *New Information* code (H8: Z = -4.64, $p < .01$) and that of *Exploration introducing new information* (H9: Z = -5.15, $p < .01$).

In comparison with the humanist approach, cognitive therapy has the clearer aim of helping people to set work objectives, using the initial sessions of problem evaluation to reeducate the client by challenging irrational cognitions and replacing them with more rational thoughts and beliefs (Conversational Act: *Exploration*, *New information* and *Exploration introducing new information*; Therapeutic Topic: *Problem*; Content *Thought*).

In the sample studied, the *New information* code was significantly higher for Ellis than Rogers (H10: Z = 5.38, p <.01). Ellis asked Gloria more exploratory questions in comparison with Rogers (H11: Z = -2.84, p <.01) and guided the conversation towards a discussion of his client's problems (H12: Z = -2.87, p <.01). With respect to the Content dimension, Ellis spoke significantly more of Gloria's beliefs and thoughts than Rogers (H13: Z = -3.82, p <.01). With respect to the comparison of Ellis versus Perls, the results allow us to accept hypothesis H14, since there were no significant differences between the therapists in terms of the use of the *New information* code (Z = 1.59), and hypothesis H15 is also supported since Ellis speaks more about thoughts and cognitions than Perls (H15: Z = -4.19, p < .01).

Naturalistic Settings

In regards the naturalistic settings sample, both therapists are experts and work according to a model in which creating a good therapeutic relationship is essential to initiate therapy (Conversational Act: *Support*). Being a systemic solution-focused therapist, there is a clear commitment to changing meaning from the beginning of treatment (Conversational Act: *New information* or *Exploration introducing new information*). The aims of the solution-focused therapist in the first session are to establish objectives and analyze the exceptions, that is, what already works (Therapeutic Topic: *Goals* and *Improvements*). With respect to the preferred contents, the systemic therapist is expected to have more *Relationship* codes.

For the cognitive-behavioral therapist, the first session is eminently exploratory (Conversational Act: *Exploration*), with a focus on trying to understand the problem (Therapeutic Topic: *Problem*) to plan the subsequent treatment. The preferred work contents of cognitive-behavioral therapists will be thoughts and behavior.

The analyses provide support for hypothesis H16, since there is no difference between the therapists in the use of *Support* codes (H16: Z = 0.51). As expected, the systemic therapist showed significantly more *New information* codes (H17: Z = 8.60, p < .01), while the cognitive therapist showed significantly more *Exploration* codes (H18: Z = -11.84, p < .01).

Regarding the Therapeutic Topic, the results allow hypotheses H19 and H20 to be accepted; the systemic therapist's proportions are significantly higher in the codes for *Goals* (Z = 6.01, $p < .01$) and *Improvements* (Z = 7.41, $p < .01$), whereas the cognitive therapist speaks more of Problems (H21: Z = -16.26, $p < .01$).

In the Content dimension, the results allow hypothesis H22 to be accepted, since the cognitive therapist spoke significantly more about the clients' thoughts and beliefs (Z = -4.05, $p < .01$) and H23 can also be accepted because the therapists did not differ in terms of the use of the *Behavior* code (Z = -1.45). Finally, hypothesis H24 is rejected since no significant differences were found in the use of the *Relationship* code, which was expected to be higher in the case of the systemic therapist (Z = 0.69).

Sequential Analyses

Sequential analyses were performed on the sample that compares the systemic therapist with the cognitive therapist. In a system such as SICOLENTE, which uses numerous codes and combinations, there are a multitude of possibilities for analysis and, therefore, the analyses carried out are guided by previous data, in this case, the hypothesis results. The client-therapist interaction was investigated[4].

The results show that the transitional probability of the therapist continuing to talk about improvements (Improvement code) after the client has discussed an improvement is .47 for the solution-focused therapist and .35 for the cognitive-behavioral therapist, this difference being significant (Z = 2.23, $p < .05$).

Along with this, these analyses allow us to know that when the client verbalizes an improvement, there is a conditional probability of .16 that the cognitive therapist continues talking about the problem as opposed to a low probability that the systemic therapist will do so (.03) (Z = -4.86, $p < .01$). Similarly, when the client's language is encoded in the Therapeutic Topic dimension as *Mixed*, (the client has expressed both positive and negative topics in the same turn), it is found that therapists choose the preferred topic of the theoretical model. Thus, the SF therapist tends to answer with a probability of .31 with the

4. In this study, sequential analyses were performed as a demonstration of their usefulness. In the following study these analyses are expanded and full interactional patterns are shown..

Improvement code, whilst this probability is .13 for the CB therapist (Z = 2.82, $p < .01$). The CB therapist tends to respond with the *Problem* code with a conditional probability of .35, which is .13 for the systemic therapist (Z = -3.38, $p < .01$).

Study 2: Comparative study of language used by novice and an expert therapist with the same client

Method

The objective of this study is to describe the differences in language use according to the therapists' experience level. The therapist-client interactions were examined in individual sessions where a novice therapist began the treatment, and an expert therapist continued it. The SICOLENTE instrument constructed in Study 1 is used to analyze language.

The design of this study is observational and inter-subject, carried out in naturalistic settings. Descriptive analyses and exploratory hypotheses are performed as a first step toward the study of differences between experts and novices.

2.1. Participants

There were six sessions, each with three participants: a client, a trainee therapist, and the expert. Sessions analyzed were of an integrative systemic model (Beyebach, 2009; Beyebach & Rodríguez-Morejón, 1999) that has solution-focused brief therapy as its foundation (de Shazer, 1985), combined with techniques from MRI therapy (Fisch, Weakland, & Segal, 1982), narrative therapy (White & Epston, 1990) and structural therapy (Minuchin, 1974). In this model, sessions are divided into two parts: an interview where client and therapist share information and an intervention where the therapist suggests homework or tasks; see Table 9 with descriptive data. The video-recordings of these sessions were selected from 23 sessions recorded at a private psychology center between 2012 and 2016. The selection criterion used to choose recordings was that the expert, who supervised trainees and was viewing the session in real time on a monitor, entered the sesion based on clinical criteria to continue the treatment's first phase in order to obtain some relevant information (Figure 1).

All participants had read and signed a written consent form to be video recorded for research purposes, preserving their anonymity.

Table 9

Description of the session analyzed

Participants	year	No. of session	Interaction[ab]	Observed sessions durations	No. Of speech turns[b]	Problem
Trainee A	2013	1	M-M	30' 39''	252-215	Drug abuse
Expert			M-M	20' 10''	153-129	
Trainee B	2013	2	F-F	42' 43''	215-199	Relationship issues
Expert			M-F	10' 8''	62-48	
Trainee C	2013	2	F-F	28' 28''	109-94	Anxiety and social skills problem
Expert			M-F	20' 24''	130-82	
Trainee D	2012	1	F-M	33' 21''	279-221	Relationship issues
Expert			M-M	10' 29''	94-74	
Trainee E	2015	1	F-M	26' 39''	201-138	Low mood issues
Expert			M-M	16' 19''	161-111	
Trainee F	2016	1	F-F	44' 16''	307-299	Low mood issues
Expert			M-F	4' 17''	52-45	

Note. [a] M = male; F= female; [b] the first is the therapist and the last the client.

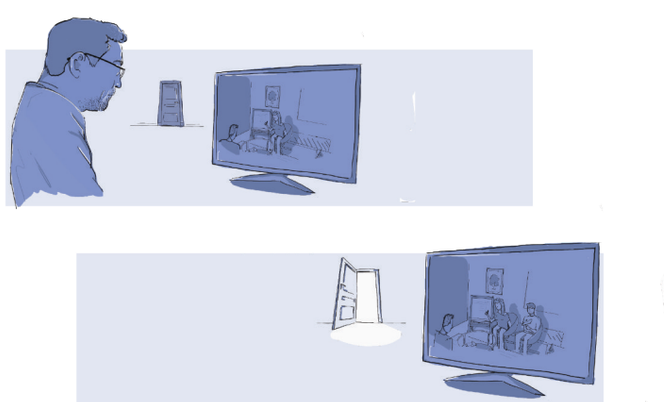

Figure 1. The expert supervises the trainee in an adjacent room with a recording system. Seeing that the case does not progress, the expert enters the session and continues it

2.1.1 Therapists

The expert was a male, 52 years old, with over 25 years of experience as psychotherapist. He is a clinical supervisor supported by three professional Spanish psychotherapist associations. Moreover, he is the author or co-author of more than 20 book chapters and articles about solution-focused therapy.

The trainees[5] were six graduate psychologists with no prior experience in psychotherapy. At the time of collecting the data, they were in their second year of a three-year training program. In the first year of training, novice therapists received theoretical training on an integrative model of systemic therapy (Beyebach, 2009; Beyebach & Rodríguez-Morejón, 1999). They carried out at least 90 hours of specific technique practices (for example, future projection, ineffective solutions, externalization) and basic interview skills (summaries, back-channels, open-ended questions, etc.). All practical skills are taught through an model where the expert performs the action for students to imitate, receiving constant feedback from their peers and teachers.

5. In this study, I will use the term trainees as a synonym for novices.

2.1.2 Clients

The sample is made up of four women and two men (their characteristics and the issues they presented are shown in in Table 9). All clients received free treatment.

2.2 Instrument

SICOLENTE

The instrument chosen to analyze the participants' language was the one that has been developed and described in study 1.

2.3 Procedure

Once the recordings that met the inclusion criteria were selected, the coding process began. As with the TAP sample from study 1b, coding was performed directly with the recordings using LINCE software (Gabín et al., 2012). The six sessions produced 3,672 speech turns.

2.4 Analysis Plan

Two statistical analyses were planned: (a) comparison of proportions through Pearson's chi-square and two sample Z-tests; (b) one-lag sequential analysis.

The first analyses compare the proportions of codes for novice therapists with those obtained by the expert therapist in the three dimensions of SICOLENTE. First, the chi-square test is carried out and if this is significant, it is checked which categories are causing the difference between the expert and novice group with the Z-test. Significant results were those in which the level of significance is $p < .05$, this implies Z values $\geq \pm 1.96$.

Sequential analyses performed are one-lag prospective and are based on the proposal by Bakeman and Quera (2011), as well as on the procedure described in Escudero et al. (Escudero, Lee, & Friedlander, 2018; Escudero & Rogers, 2004). To perform these analyses, data was exported to the specialized software GSEQ (v.5.1.22).

Analyses are based on transitional probabilities, that is, how likely it is that given an event x (antecedent), an event y (subsequent) follows. For example, it can be calculated the transitional (or conditional) probability that exists when a person asks, that another responds, or the probability that, after the therapist outlines part of the problem, the client continues talking about it. Thus, it is possible to verify the existence of relational patterns

between the language used by therapists and clients. The analysis was carried out in the two possible directions of the conversation: therapist-client and client-therapist. In this way it can be determined if the relational pattern is *unidirectional* or *bidirectional* (Escudero & Rogers, 2004).

The first step in these analyses is to perform a Pearson's chi-square test with a contingency table with frequencies of antecedents codes in the rows and the frequency of consequent codes in the columns. If the chi-square shows significant results, the second step is to investigate the adjusted residuals (Z scores) to corroborate which pairs of codes are related. If these scores are positive, it implies that they *activates* the consequent code, and if they are negative, it implies that they *inhibits* the consequent code (Escudero & Rogers, 2004). Following the guidelines set out by Bakeman and Quera (2011, p.110) data was analyzed only when the row sum was at least 30 and the adjusted residuals were $Z \leq \pm 2.58 = p < .01$. This procedure is followed so as not to incur in an overestimation of the adjusted residuals and, therefore, a Type I error.

Results

To perform both analyses, participants were grouped according to their experience. It is presumed that any differences that could be generated by clients are controlled since trainees and expert have interacted with the same client.

Comparison of SICOLENTE Code Proportions between Expert and Novice

Conversational Act

It was observed in the descriptive analyses that the three most used categories by the novice and expert therapists are: *Support*, *Exploration* and *New information*, which constitute 90.2% of what the expert does and 91.8% of what the trainees do. The least-used categories are *Comment* (2.8% the expert and 2.5% the trainees) and *Exploration introducing new information* (7.1% the expert and 5.8% the trainees). Taking this all into account, the statistical test shows that there are significant differences between the two groups [χ^2 (4, N = 2015) = 24.292, $p < .000$]. This indicates that this first global percentage is broken down differently for each group: the expert presented 25.5% of *New information* code and the trainees 17.4%. The *Support* code was encoded on 60.5% of the occasions for trainees, compared to 50% in the expert (Z = 4.46, $p < .01$).

Client language was similar in both experience groups, with the Follow code used 99.8% of the time when talking to the expert and 99.1% when talking to trainees. The Reject code (which indicates client's disagreement with or clarification of what the therapist has said) has an extremely low appearance, accounting for only 0.2% of the conversation with the expert (only one occurs) and 0.9% of the conversation with trainees (12 rejections distributed in four of the six trainees, with a minimum of 2 and a maximum of 4 rejections per session). Table 10 and Figure 2 include descriptive data and explain the statistical analyses.

To continue analyzing the results, the two main categories that handle common information with the client (*Exploration* and *Support*) and the two that introduce new information by the therapist (*New information* and *Exploration introducing new information*) were collapsed. Despite the fact that the expert spent less time in therapy session, the ratio of *shared information/new information* was 422/212 =

Table 10

Differences in the use of language between trainnes and the expert therapist

		Expert		Trainees		
		f	%	*f*	%	Z
Conversational Act	Exploration	96	14.7	189	13.9	
	Support	326	50.0	824	60.5	**4.46
	New information	166	25.5	237	17.4	**4.25
	Exploration INI	46	7.1	79	5.8	
	Comment	18	2.8	34	2.5	
		χ^2 (4, N = 2015) = 24.292, p < .000				
Therapeutic Topic	Improvement	81	12.4	290	21.3	**4.85
	Problem	131	20.1	202	14.8	**2.95
	Goal	120	18.4	126	9.2	**5.87
	Rules	11	1.7	27	2.0	
	Neutral	295	45.2	705	51.7	**2.83
	Mixed	14	2.1	13	1.0	*2.13
		χ^2 (5, N = 2015) = 65.127, p < .000				
Content	Behavior	45	6.9	136	10.0	*2.28
	Thought	60	9.2	83	6.1	*2.53
	Emotion	25	3.8	90	6.6	**2.69
	Physiology	13	2.0	23	1.7	
	Relationship	93	14.3	182	13.4	
	Mixed	40	6.1	59	4.3	
	Unspecific	376	57.7	790	58.0	
		χ^2 (6, N = 2015) = 20.027, p < .003				

Note. INI = exploration introducing new information; only values that obtained significant tests appear in the column Z.
* p < .05
** p < .01

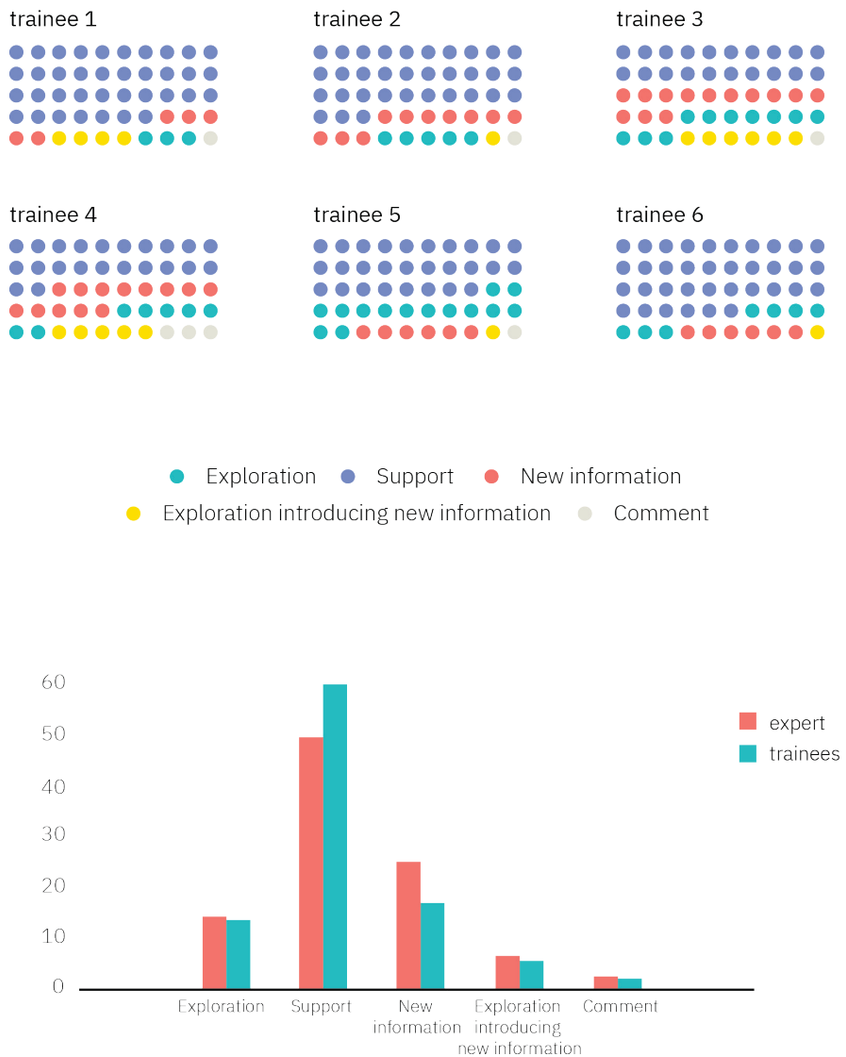

Figure 2. Proportions of codes used in Conversational Act for each trainee and comparison with the expert

1.99, while that of the trainees was 1012/316 = 3.2. This shows that for approximately every two occasions in which the expert talks with the client using common information, he introduces new information on at least one occasion. Trainee therapists, in contrast, introduce new information approximately every three occasions. This difference in the use of information is statistically significant. [χ^2 (1, N = 1963) = 20.289, p < .000; Z = 4.49] (see Table 11).

Table 11

Use of shared and new information based on the therapist's experience

		Expert		Trainees		
		f	%	*f*	%	Z
Information	Shared	422	66.6	1012	76.2	**4.49
	New	212	33.4	316	23.8	**-4.49
		χ^2 (1, N = 1963) = 20.289, p < .000				

Note. Shared information: all Exploration and Support codes were collapsed into this new category; *New information*: all New information and Exploration introducing new information codes were collapsed into this new category

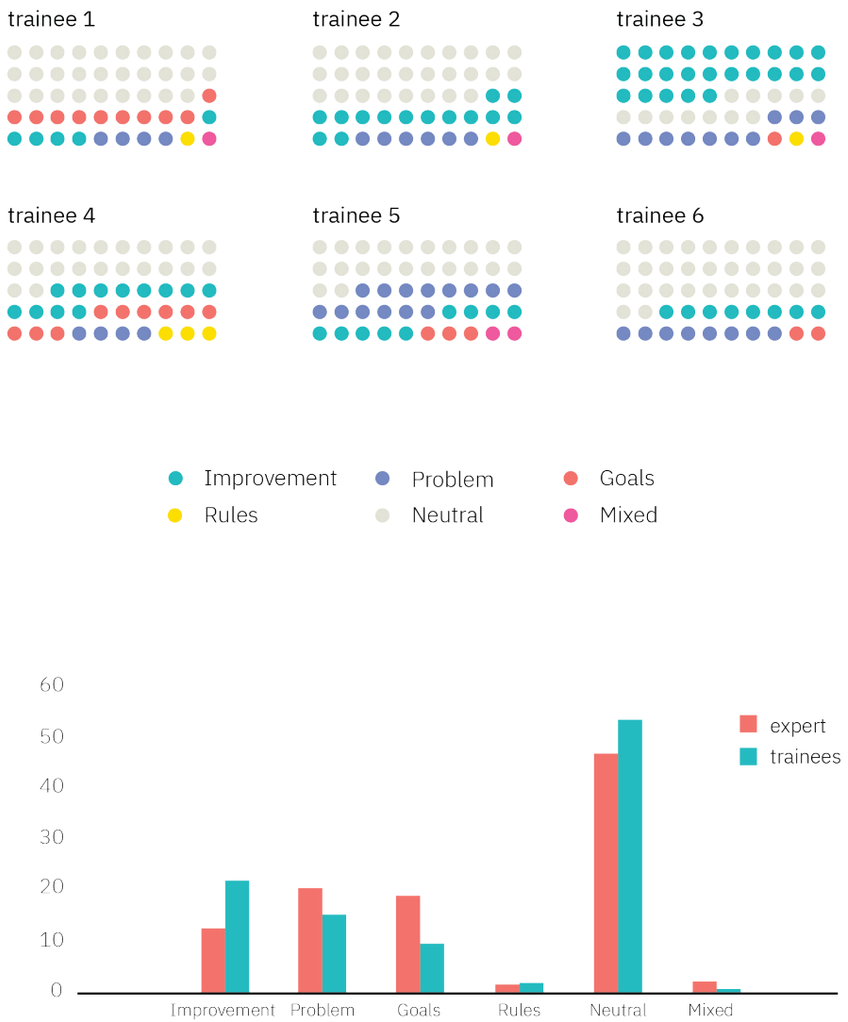

Figure 3. Proportions of codes used in Therapeutic Topic for each trainee and comparison with the expert

Therapeutic topic

In the second dimension it is observed that the topic most used by both the expert and the novices is *Neutral* (46% for the expert and 52.8% for the novices). This is probably the most common topic due to the use of backchannels ("uh-huh", "yeah", "right"). The rest of the categories have disparate percentages (see Table 10 and Figure 3). The statistical test shows that there are significant differences between the two groups [χ^2 (5, N = 2015) = 65,127, p < .000]. Trainees have a significantly higher proportion of *Improvement* and *Neutral* codes than the expert (Z = 4.85, p <.01 and Z = 2.83, p <.01 respectively). On the other hand, the expert therapist has higher proportions than novice therapists in the *Problem* code (Z = 2.95, p < .01), *Goals* code (Z = 5.87, p < .01) and *Mixed* code (Z = 2.13, p <. 05).

Content

In this case, the most common category for the two experience groups is *Unspecific* (57.7% for the expert and 58% for novices) followed by the *Relationship* category (14.3% for the expert and 13.4% for novices). Both results were expected. The *Unspecific* code is part of the back-

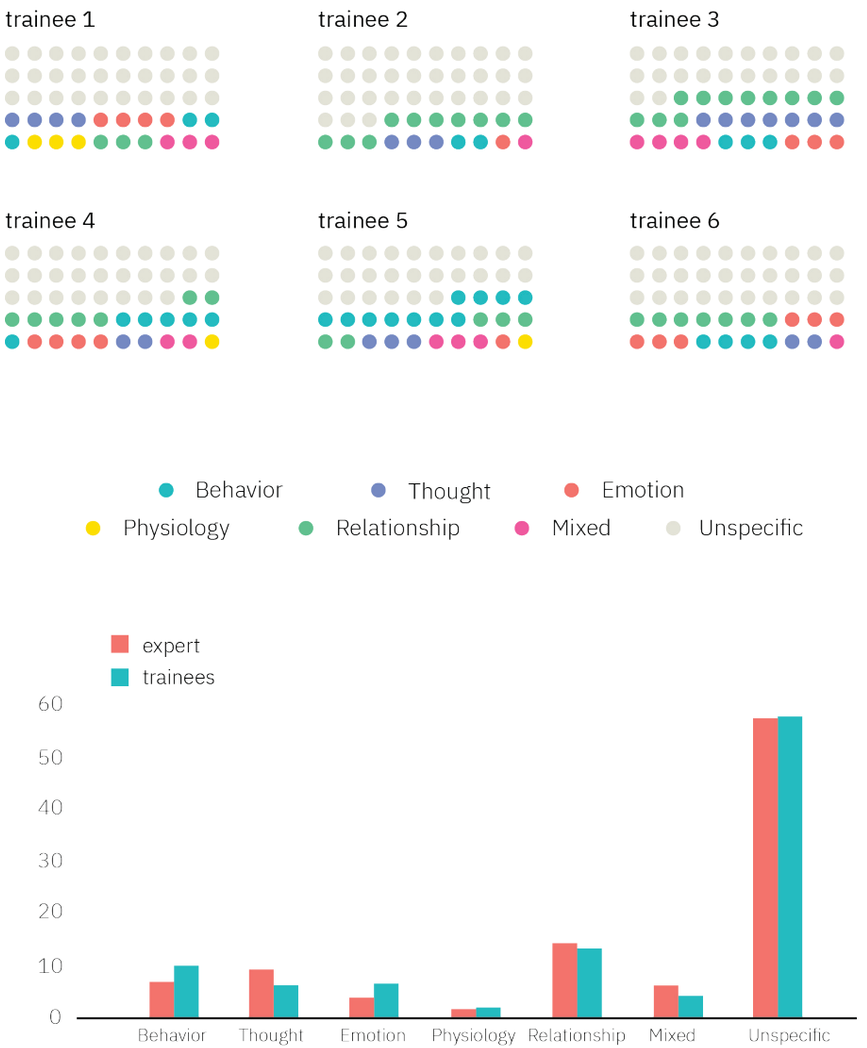

Figure 4. Proportions of codes used in Content for each trainee and comparison with the expert

channels (the complete code is *Support-Neutral-Unspecific*) and the *Relationship* code characterizes systemic therapists as seen in the first study. In the third and last dimension, significant differences have also been found between the expert and the novice therapists [χ^2 (6, N = 2015) = 20.027, $p < .003$]. The expert therapist speaks significantly more about thoughts than novices (Z = 2.53, $p < .05$). For their part, novice therapists talk more about the client's behavior (Z = 2.28, $p < .05$) and emotions (Z = 2.69, $p < .01$) than the expert therapist (see Table 10 and Figure 4).

Finally, the differences between the expert and the novices are investigated taking advantage of the three-dimensional structure of the SICOLENTE. To do this, categories were collapsed to generate two new ones. The results by dimension indicate that the *Neutral* and *Unspecific* categories are the most used in the second and third column respectively. Since these two categories tend to appear when therapists perform backchannels, the idea was to investigate this element in depth. The triad of *Support-Neutral-Unspecific* codes ("of course", "aha", "I understand", "ok"), was called *Weak supports*, and all other *Supports* (except for the *Support-Rules*-any Content

Table 12
Weak and strong support based on the therapist's experience

		Expert		Trainees		
		f	%	*f*	%	Z
Support	Weak	256	78.5	523	63.8	**-4.81
	Strong	70	21.5	297	36.2	**4.81
		χ^2 (1, N = 1146) = 23.304, $p < .000$				

Note. The *Weak support* code is the triad SNU.
The *Strong support* code consists of the following triads: SIB, SIT, SIE, SIP, SIR, SIX, SIU, SPB, SPT, SPE, SPP, SPR, SPX, SPU, SGB, SGT, SGE, SGP, SGR, SGX, SGU, SNB, SNT, SNE, SNP, SNR, SNX, SXB, SXT, SXE, SXP, SXR, SXX, SXU

category) were called *Strong supports* (i.e. validate the problem, client goals or improvement; regardless of whether they are behavioral, cognitive, emotional, relational, etc.).

Results indicated that there was a significant difference based on experience [χ^2 (1, N = 1146) = 23.304, $p < .000$]. Trainees used more *Strong supports* than the expert and the expert more *Weak supports* than the trainees (Z = 2.28, $p < .01$) (see Table 12).

Sequential analysis

As already described in the analysis plan, sequential analyses are performed to understand the language used in interaction. In this case, the three SICOLENTE dimensions were first analyzed in the direction therapist-client (t-c) and then, the same analyses were performed in the opposite direction, client-therapist (c-t).

Therapist-Client

Conversational Act (t-c)

Only the trainee-client sequences were significant [X^2 (8, N =1212) = 73.17, $p < .01$]. Three relational patterns were found. First, the *Support* code always activates the *Follow* code in clients (Z = 3.10, $p < .01$). The other two patterns indicate that whenever novices made changes of meaning (*New information* or *Exploration introducing new information*), this activated the client's *Reject* code (*New information→Reject*: Z = 2.85, $p < .01$; *Exploration introducing new information→Reject*: Z = 3.78, $p < .01$).

As indicated at the beginning of the previous paragraph, the sequential analysis of the expert with clients was not significant [X^2 (4, N = 489) = 2.40, p = .67]. These results were expected considering that, in the contingency table, the joint frequencies of the *Reject* code display 0 in four cells. This means that, given the testing requirements, statistical analyses cannot be performed. Despite the lack of statistical significance, describing the result is understood to be relevant: there can be no relational pattern with a code that does not occur, in this

Table 13

Sequential analysis of the Conversational Act dimension in therapist-client interaction

	Clients (targets)			
	Expert		**Trainees**	
Therapists (givens)	follow	reject	follow	reject
Exploration	1	.00	1	.00
	0.48	-.048	1.50	-1.50
Support	1	.00	1*	0*
	0.84	-0.84	3.48	-3.48
New information	.99	.01	.97*	0.3*
	-1.55	1.55	-2.86	2.86
Exploration INI	1	.00	.94*	.06*
	0.32	-0.32	-4.88	4.88
Comment	1	.00	1	.00
	NI	NI	NI	NI
	X^2 (4 N = 489) = 2.4, p =.67		X^2 (4 N = 1167) = 32.12, p <.01	

Note. The transitional probabilities appear first and below the adjusted residuals (Z). NI = The adjusted residues were not interpretable due to low code frequency; Exploration INI = exploration introducing new information.
* Z ≥ ± 2.58 = $p < .01$

case, the rejection of the expert therapist. In other words, the therapist has not caused as many *Reject* codes as could be expected by chance (see Table 13).

Therapeutic Topic (t-c)

Both the trainee-client interaction [X^2 (25, N = 1168) = 1562.10, p <.01] and the expert-client interaction [X^2 (25, N = 489) = 496.40, p <.01] were significant. In both interactions, the topic that therapists talk about tends to activate the same topic in clients and inhibit the rest (see Table 14). For example, if the therapist starts talking about the problem, this inhibits clients from talking about their goals and improvements and activates them talking about the problem.

Content (t-c)

As with the Therapeutic Topic dimension, novice-client interactions [X^2 (36, N = 1165) = 588.88, p < .01] and expert-client [X^2 (36, N = 489) = 209.83, p < .01] were statistically significant. Clients tend to keep talking about the contents (e.g. behavior, cognitions, emotions) that therapists raise (see Table 15).

Table 14

Sequential analysis of the Therapeutic Topic dimension in therapist-client interaction

		Clients (targets)																	
		Expert						Trainees											
Therapists (givens)		I	P	G	R	N	X	I	P	G	R	N	X						
Improvement (I)	.85*	.01*	.00*	.00	.07	.07	.79*	.08*	.00*	.00	.09*	.03							
	14.03	-7.12	-4.84	NI	1.17	1.17	20.01	-8.21	-6.07	-1.19	-7.22	0.98							
Problem (P)	.05*	.88*	.01*	.00	.03*	.03	.04*	.82*	.01*	.00	.09*	.03							
	-5.03	12.42	-6.19	NI	-3.58	-1.04	-8.03	17.62	-4.61	-0.97	-5.92	-0.97							
Goal (G)	.02*	.11*	.74*	.00	.06	.06	.02*	.09*	.75*	.00	.14*	.01							
	-5.35	-6.28	14.29	NI	-2.34	1.00	-6.58	-4.74	22.76	-0.72	-3.29	-1.95							
Rules (R)	.00	.00	.00	.00	.00	.00	.13	.00	.00	.33	.53	.00							
	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI							
Neutral (N)	.18	.39	.16	.00	.24*	.04	.20*	.25*	.07*	.00	.42*	.06							
	-1.88	0.08	-2.53	NI	5.59	-0.57	-6.65	-2.66	-4.40	-2.27	12.03	1.86							
Mixed (X)	.40	.10	.10	.00	.40	.00	.33	.22	.00	.00	.00	.44							
	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI							
	X^2 (25, N=489) = 496.40, p < .01							X^2 (25, N = 1168) = 1562.10, p < .01											

Note. The transitional probabilities appear first and below the adjusted residuals (Z). NI = The adjusted residues were not interpretable due to low code frequency.
* Z ≥ ± 2.58 = p < .01

Client-Therapist

In this direction, the study focuses on the therapist's response to the client's language. It also shows if patterns are unidirectional or bidirectional, considering the previous results of the therapist-client interaction.

Conversational Act (c-t)

None of the interactions were statistically significant. This means that neither the client's Follow code nor the *Reject* code generate an interactional pattern, indicating that the Conversational Act dimension has a unidirectional structure (i.e. only the therapist activates or inhibits client behaviors). Again, these results should be taken with caution because the client's *Reject* code produces too many cells with values of 0 or low frequencies, preventing the conditions of Pearson's chi-square statistical analysis from being met (see Table 16).

Therapeutic Topic (c-t)

Client-novice interactions [X^2 (25, N = 1165) = 1000.14, $p < .01$] and client-expert interactions [X^2 (25, N = 489) = 269.45, $p < .01$] were statistically significant in this dimension. The interactional pattern is bidirectional;

Table 15

Sequential analysis of the Content dimension in therapist-client interaction

	Clients (targets)																					
	Expert							Trainees														
Therapists (givens)	B	T	E	P	R	X	U	B	T	E	P	R	X	U								
Behavior (B)	.31*	.02	.02	.00	.03	.02	.60	.22*	.04	.05	.02	.02	.01	.64								
	8.22	-1.54	-0.91	-1.11	-1.85	1.03	-1.12	7.77	-1.28	-0.68	1.17	-4.81	-1.71	0.42								
Thought (T)	.00	.20*	.06	.00	.02*	.03	.69	.06	.20*	.02	.00	.04*	.06	.62								
	-2.23	4.92	1.05	-1.18	-2.49	-0.50	0.34	-0.77	6.20	-1.70	-1.17	-2.58	1.21	-0.02								
Emotion (E)	.03	.03	.14*	.03	.06	.06	.67	.08	.04	.31*	.00	.01*	.02	.54								
	-0.91	-0.91	3.23	0.43	-0.99	0.39	-0.03	0.17	-0.70	10.54	-1.23	-3.77	-0.77	-1.89								
Physiology (P)	.06	.00	.00	.18	.00	.00	.76	.00	.00	.00	.35	.05	.00	.60								
	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI								
Relationship (R)	.02*	.03	.01	.00	.30*	.02	.63	.01*	.03	.03*	.00	.32	.02	.58								
	-2.64	-1.80	-2.16	-1.83	8.46	-1.32	-1.22	-5.09	-2.52	-2.86	-2.03	12.29	-1.93	-1.98								
Mixed (X)	.02	.07	.05	.03	.03	.07	.73	.06	.10*	.06	.00	.13	.05	.59								
	-1.56	0.15	0.51	0.94	-1.89	1.00	1.05	-0.82	2.85	-2.25	-1.64	0.01	1.62	-1.01								
Unspecific (U)	.06	.06	.04	.02	.04*	.07	.69	.08	.04	.04	.01	.05*	.05	.72*								
	0.06	0.06	0.10	0.56	-2.70	1.88	0.68	0.42	-1.68	-1.68	0.09	-4.69	2.14	3.89								
	X^2 (36, N = 489) = 209.83, $p < .01$							X^2 (36, N = 1165) = 588.88, $p < .01$														

Note. The transitional probabilities appear first and below the adjusted residuals (Z). NI = The adjusted residues were not interpretable due to low code frequency.
* $Z \geq \pm 2.58 = p < .01$

therapists tend to follow the topic proposed by client, just as clients follow the topic raised by therapists (see Table 17). The structure of activation and inhibition of codes is also similar.

Content (c-t)

Results in the last dimension also indicate that there is a client-novice [X^2 (36, N = 1168) = 762.43, $p < .01$] and a client-expert interactional pattern [X^2 (36, N = 489) = 497.22, $p < .01$]. As with the second dimension, Content presents a bidirectional pattern: both therapists and clients tend to continue talking about the content raised by the interlocutor (see Table 18).

Table 16

Sequential analysis of the Conversational Act dimension in client-therapist interaction

	Therapists (targets)									
	Expert					**Trainees**				
Clients (givens)	E	S	N	I	C	E	S	N	I	C
Follow	.07	.66	.21	.04	.02	.09	.70	.16	.04	.02
	0.28	-0.72	0.51	0.21	0.14	-1.11	1.09	-0.17	-0.93	0.42
Reject	.00	1	.00	.00	.00	.18	.55	.18	.09	.00
	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
	X^2 (4 N = 489) = 0.52, p =.97					X^2 (4 N = 1164) = 2.51, p <.65				

Note. The transitional probabilities appear first and below the adjusted residuals (Z). NI = The adjusted residues were not interpretable due to low code frequency. * Z ≥ ± 2.58 = $p < .01$

Table 17

Sequential analysis of the Therapeutic Topic dimension in client-therapist interaction

	Therapists (targets)														
	Expert						**Trainees**								
Clients (givens)	I	P	G	R	N	X	I	P	G	R	N	X			
Improvement (I)	.38*	.02*	.00*	.00	.58	.02	.52*	.01*	.01*	.00	.46*	.01			
	10.44	-4.36	-4.65	-1.20	0.16	-0.16	17.91	-8.27	-5.69	-1.91	-4.89	-0.02			
Problem (P)	.02*	.32*	.06*	.00	.59	.02	.04*	.44*	.02*	.00	.49*	.01			
	-5.18	8.09	-3.98	-1.79	0.64	-0.58	-8.37	18.21	-4.64	-2.46	-3.23	0.00			
Goal (G)	.02*	.04*	.44*	.02	.47	.02	.02*	.02*	.42*	.04*	.50	.00			
	-3.27	-3.65	10.26	1.01	-2.57	-0.11	-5.27	-4.06	15.4	2.87	-1.62	-0.92			
Rules (R)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00			
	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI			
Neutral (N)	.08	.11	.09	.05*	.65	.03	.08*	.03*	.08	.02	.80*	.00			
	-0.83	-1.05	-1.08	3.09	1.23	0.63	-5.76	-7.07	0.39	0.56	9.54	-1.61			
Mixed (X)	.05	.05	.14	.00	.71	.05	.17	.15	.04	.02	.57	.06*			
	NI	NI	NI	NI	NI	NI	-0.42	0.11	-1.05	0.40	-0.03	4.88			
	X^2 (25, N=489) = 269.45, $p < .01$								X^2 (25, N = 1168) = 1000.14, $p < .01$						

Note. The transitional probabilities appear first and below the adjusted residuals (Z). NI = The adjusted residues were not interpretable due to low code frequency.
* Z ≥ ± 2.58 = $p < .01$

Table 18

Sequential analysis of the Content dimension in client-therapist interaction

	Therapists (targets)													
	Expert							**Trainees**						
Clients (givens)	B	T	E	P	R	X	U	B	T	E	P	R	X	U
Behavior (B)	.69*	.08	.00	.00	.00*	.08	.15	.53*	.05	.07	.01	.09*	.11	.15
	11.55	-1.04	-1.84	-1.24	-3.94	-0.87	-1.49	12.76	-1.22	-0.80	-0.80	-5.20	-1.19	-2.52
Thought (T)	.04	.45*	.02	.00	0.6*	.22	.22	.04*	.35*	.04	.00	.18	.23	.16
	-1.85	7.16	-1.56	-1.43	-3.56	2.20	-0.66	-2.66	9.14	-1.41	-1.17	-2.29	2.23	-1.61
Emotion (E)	.04	.00	.48	.04	.13	.13	.17	.11	.00*	.53*	.01	.14*	.10	.11*
	NI	NI	NI	NI	NI	NI	NI	-0.89	-2.68	14.65	-0.33	-3.16	-1.12	-2.76
Physiology (P)	.00	.17	.08	.50	.00	.00	.25	.10	.19	.00	.33	.05	.14	.19
	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Relationship (R)	.00*	.04*	.04	.00	.84*	.04*	.05*	.04*	.01*	.02*	.02	.71*	.10	.10*
	-3.64	-2.78	-1.41	-1.88	12.86	-2.56	-4.67	-4.34	-3.71	-3.03	0.75	12.78	-1.58	-4.67
Mixed (X)	.10	.06	.10	.03	.00*	.35*	.35	.08	.08	.06	.02	.21	.30*	.26
	-0.39	-1.13	0.51	-0.08	-3.48	4.14	1.34	-1.50	0.04	-0.75	0.10	-1.40	3.41	0.43
Unspecific (U)	.10	.12	.07	.04	.22	.11	.34*	.13	.08	.06*	.01	.27	.14	.32*
	-1.34	-0.50	-0.51	0.14	-2.30	-0.63	4.44	-2.24	0.27	-3.44	-2.35	-1.80	-0.11	7.00
	X^2 (36, N = 489) = 497.22, $p < .01$							X^2 (36, N = 1168) = 762.43, $p < .01$						

Note. The transitional probabilities appear first and below the adjusted residuals (Z). NI = The adjusted residues were not interpretable due to low code frequency.
* Z ≥ ± 2.58 = $p < .01$

Study 3: Experimental Study of the Use of Language and Clinical Reasoning of Experts and Novices Therapists

Method

The objective of this study is to investigate differences in the use of language between expert and novice therapists. This experimental task also investigates a fundamental aspect of psychotherapists' language when they are in therapy session: the intentional use of language. This implies that therapists make quick decisions about what to say and how to say it during the dialogue. The design of the study is quasi-experimental, inter-subject, and it is proposed as an analogous task to the therapist-client interaction that occurs in psychotherapy. The SICOLENTE instrument is used to codify the language, and procedures of the *Grounded*

Theory (Glaser & Strauss, 1967) to analyze the reasoning offered by the participants. In this third study, exploratory and confirmatory hypotheses were formulated and pre-registered in the repository Open Science Framework (https://osf.io/23hsw).

The pre-register specifies the design and analysis plan along with the hypotheses (especially confirmatory ones). This means that results obtained are transparent and we therefore prevent exploratory analyses from being identified as confirmatory in a post-hoc manner, minimizing false positive results (Nosek, Ebersole, DeHaven, & Mellor, 2018).

3.1 Participants

The total sample for the study was of 70 therapists, 51 novice therapists (29.9% men) and 19 expert therapists (63.2% men). All therapists took part in the experiment on a voluntary basis after reading and signing the informed consent form at the beginning of the task. All participants were randomly assigned either to a *normal condition* or *rejection condition* (explained below). The novice therapists were recruited from master's degree course in General Health Psychology at the University of Malaga

and in private postgraduate training centers in Spain. Expert therapists were recruited by word of mouth, contacting therapists with known experience in different cities of the country and snowball sampling other professionals. The general definition set out in the methodology section is used to define an expert or novice therapist.

3.2 Instruments

SICOLENTE

The instrument chosen to analyze the language used by participants was the same that was developed and described in study 1.

Experimental Task

To carry out the analogous experiment, a computer program in C# language was created. The study was always conducted in silent contexts and without interruptions, using a laptop and headphones for participants.

The experimental task has two parts. The first part consists of a brief questionnaire covering professional and demographic aspects (see questions in Table 19). The

second is the analogous task: a conversation in eight consecutive fragments or vignettes (i.e. the second fragment follows what has been said in the first and it will precede what is said in the third) in which an actor appears, filmed in a medium shot, performing the role of a client diagnosed with major depression in his first therapy session.

Each participant's conversation is based on the choices they make during the task and the experimental condition under which they are participating (see Annex 1 for the actor's script and the predetermined options). In this way, the task has a stochastic behavior.

3.3 Procedure

3.3.1 Experimental Task

Participants were randomly assigned to one of the two experimental conditions (described in section 3.3.1.2). First, participants answer the questionnaire and, after listening to the researcher's instructions and reading them on the computer, the experimental task starts (described in section 3.3.1.1). The task begins by showing the first fragment of the conversation. When the video stops, the image of the actor disappears. Participants must say out

Table 19

Variables of the experimental task questionnaire

	Questionnaire	Values
Demographic data (before the tastk)	Age	• 18-25 • 26-35 • 36-45 • 46-55 • 56-65 • 66 years or older
	Gender	• Female • Male
Experience and model data (before the task)	How long have you been continuously working as a psychotherapist?	• Less than two years • Between 2 and 4 years • Between 5 and 10 years • More than 10 years
	What is the model you mainly use? If you normally use more than one model, you can write which ones on the next page	• Cognitive-behavioral • Acceptance and commitment • Mindfulness • Solution-focused • Strategic • Structural • (Free text field)
	Please, use the box to write five techniques that you usually use in psychotherapy	Free text field
	Were you supervised by an expert in your training?	• Yes, I was supervised • No, I was not supervised
Credibility (after the task)	Did you know the actor personally or had you seen him act before	• Yes, I knew the actor • No, I did not know the actor
	About the perferomance you have seen: did you find it realistic or credible?	A scale of 0 ("the situation was totally unreal") to 10 ("the situation was totally credible")

loud what they would in that circumstance and the reason for what they said. The participant's language and justification are recorded with the computer's microphone.

As an example, Alejandro (the actor) appears and says "I'm feeling bad for no reason and I don't know what is wrong with me," then the video disappears and an instruction appears reminding the participant to respond out loud and explain the reasons for his or her answer. Continuing with the example, the participant could now say "...and how long have you felt like this?" (he/she is silent for a few seconds) and then explain the reason for his/her intervention: "I say this to give me a more in-depth idea of what is happening to him." After this, the therapist presses a button to stop the audio recording.

The task then asks the participant to choose between two response options: one that validates or asks about the information provided by the client, and another that focuses more on introducing new information (reframes, standardizations, interpretations, deconstructions). All choice options are shown in Annex 1. After choosing an option and depending on the experimental condition the participant is taking part in, the next video will show the

reaction to the choice made. Participants therefore receive feedback from the client based on the choices they select and thus recreate the therapist-client interaction (Figure 5 explains the steps of the task).

Regardless of the condition in which they participate, the procedure is repeated eight times: a video appears, the participant has time to respond aloud to what the client said, the participant expresses his or her reason for answering in the way he/she did, and lastly, the participant chooses an option that leads to a new video fragment.

At the end of the experimental task, participants answer the two verification questions about the credibility of the task. Participants are explained how the experiment works, and they are encouraged to ask questions. The email address of interested therapists is collected to send them the published results.

3.3.1.1 Instructions for the Experimental Task

Before starting the task, all participants listen to and read the following instructions: "Next, you will see an actor performing the role of a client with major depression in his first therapy session. How the therapy works has

already been explained and the first thing you will see is the actor answering the question "How can I help you?" After viewing each fragment, you must say your answer out loud and the reason for choosing what you said. After this, two response options will appear. Take all the time you need to choose the option that you think is closest to what you would do. Remember that the scene cannot be repeated and that the actor will react to the choice you make. If you have any questions, please ask before starting. We hope it is enjoyable for you and thank you for participating."

3.3.1.2 Operation of the Experimental Task

The task presents two experimental conditions, called *normal condition* and *rejection condition*. Figure 6 explains the behavior of the experimental task through pseudocode.

In the *normal condition*, the task attempts to model the real therapist-client interaction obtained in studies 1 and 2 in naturalistic settings. Thus, if participants choose the option that validates or asks about the client's information, the client will tend to continue talking without disagreeing with the therapist's intervention (95%

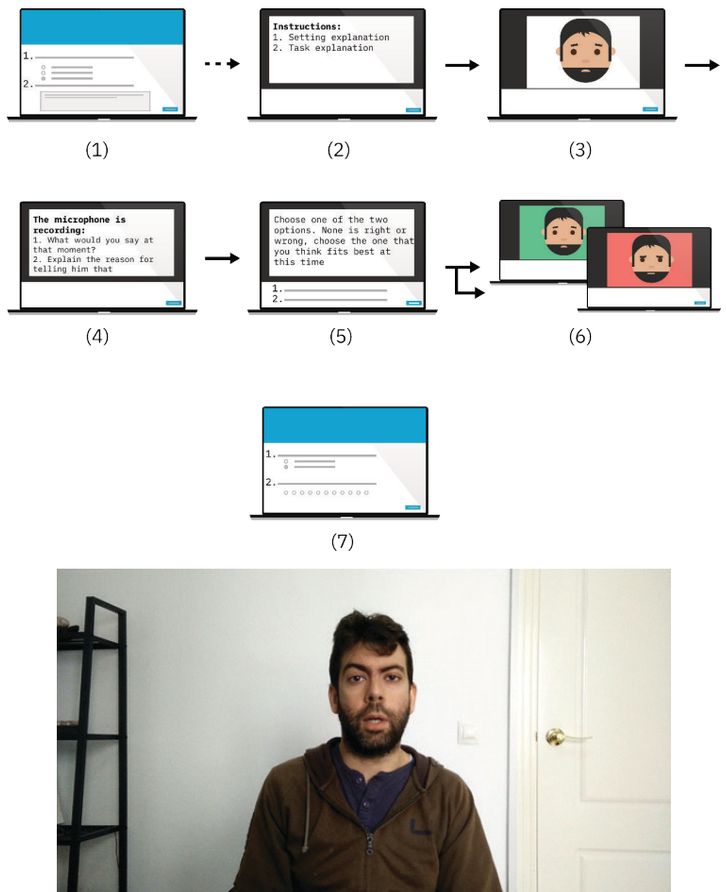

Figure 5. Procedure of the experimental task and frame of the actor in the task. Each participant performs steps 1, 2 and 7 only once and steps 3, 4, 5 and 6 are the experimental task. (1) prior questionnaire with professional and personal information on participants; (2) instructions of the experimental task; (3) the first time the actor appears; (4) the moment when participants answer out loud and the reason for their answer; (5) participants choose between two preset options; (6) depending on the condition and the choice, the task will show the version where the client follows or rejects, and the sequence 4, 5, 6 is then repeated nine times; (7) two questions about the credibility of the task.

of the time they will continue the conversation and only 5% of the time the actor will show disagreement with what the therapist said). On the other hand, the change of meaning preset option will be much more likely to be rejected (the actor will continue the conversation 10% and will show disagreement 90% of the time).

In addition, the task has a probability modifier for the preset option that introduces information. This modifier is designed to model the effect of the therapeutic relationship (the more understood the client feels, and the less he demonstrates that he disagrees with the therapist, the easier it will be to accept changes of meaning). Each time the client follows the conversation showing agreement with what the therapist "said" (preset options), the probability that the option that introduces information is accepted by the client increases by 5%.

In the *rejection condition*, the task presents the same actor, only showing the answers in which he appears showing disagreement, regardless of the preset option chosen by the therapist.

OPTION THAT DOES NOT PROVIDE NEW INFORMATION

```
If RANDOM is smaller or equal to 95
  {
      Client follows what the therapists chose
      and
      RELATIONSHIP increases in 5
  }
Else
  {
      Client rejects what the therapists chose
  }
```

OPTION THAT PROVIDES NEW INFORMATION

```
If RANDOM is smaller or equal to (10 + RELATIONSHIP)
  {
      Client follows what the therapists chose
      and
      RELATIONSHIP increases in 5
  }
Else
  {
      Client rejects what the therapists chose
  }
```

Figure 6. Pseudocode explaining how the experimental task is conducted. *RANDOM is a variable that replicate a 100-side dice's behavior. Each time the participant choose a preset option, a new "roll dice" occurs;*

RELATIONSHIP imitates the therapeutic relationship. The more the client "follow", the easier the actor will accept the new information option

3.3.2 Use of Language

All the answers that the actor can provide, as well as the preset options of the study, have been previously coded with the SICOLENTE instrument. Thus, at the end of the task, the program generates two CSV files: one with the questionnaire data and another with the answers of the actor and the language options chosen by participant. The responses provided by participants (those expressed verbally) are transcribed and analyzed with the SICOLENTE instrument.

3.3.3 Language Use Justifications

In the free responses verbalized by participants, they are asked to justify what they just said to the client. Two different participants may therefore ask the client the same question, for example “how long have you been this sad?” with different intentions: “to check if the sadness is always as intense” or “to let him tell his story, to check if it is episodic.”

Since the use of language cannot be justified while it occurs, minimizing the time between action (use of language) and justification is the most online procedure possible. These verbalizations about a person's motives

and decisions regarding an action are called *thinking-aloud* (Ericsson & Simon, 1984; Someren, Barnard, & Sandberg, 1994).

To analyze the reasons given by participants for their use of language, the procedure suggested in the *Grounded Theory* has been used (GT henceforth; Charmaz, 2006; Glaser & Strauss, 1967) with qualitative analysis software Atlas.ti (v8.4.16). The GT inductively analyzes the data in order to generate theories about such data (Rennie, 2000). The central idea is to be able to explain data within its own context.

This work is carried out following the proposal of GT by Rennie, Phillips and Quartato (1982). The first step is to transcribe what participants verbalize as justification for their interventions. This transcript is divided into *meaning units*. In this work, a linguistic criterion was used for this division, such that if the justification has pauses, copulative or adversarial links, it is understood that they are different meaning units. If after these links or pauses the person continues to express the same reason, the same code is not repeated, that is, a specific reason may not present, for example, the code "validation" twice. This first step was carried out with the printed transcripts of the first

20 participants and uses colors to separate the units. During this process, ideas about possible categories are noted.

Once the division is made, meaning units are compared with each other and a name (*category*) is given to those that share a common meaning. For example, all justifications such as "empathize" or "validate" or "I'm putting myself in his shoes" share a meaning that can be categorically described as "validating the client's emotion." This task of naming the participant's reasons is carried out individually by five people at two different times. First, the PhD student, the thesis supervisor and an external Doctor of Psychology independently analyzed each of the texts proposing all the categories they deemed necessary. Once the final sample was obtained, a philosopher and an occupational therapist performed the same procedure to verify the suitability of the proposals and enrich them. These first categories serve to understand the structure of the data and ensure that personal biases are not being introduced into the work, such as, for example, biases of psychotherapeutic models, or subjective qualifications regarding the quality of the responses.

The procedure continues by categorizing meaning units in all categories that fit (*open categorization*) and creating as many categories as necessary. After this iterative process, a category model is reached that can be used to explain all the reasons given by participants.

The next step is to make the model parsimonious. This implies understanding how categories are related to each other and which ones should be discarded or grouped into bigger categories. With this first model, the thesis supervisor works from a top-down approach, grouping and generating higher order categories based on theoretical-clinical knowledge of psychotherapy. Categories were defined and examples and counterexamples created. Finally, the entire sample was coded again with the category system created from scratch (the final category system is presented in results).

3.4 Analysis plan

3.4.1 Data quality

An intra-coder analysis was proposed (three weeks after the first coding) to ensure the quality of coding data produced with SICOLENTE. Twenty two random participants were selected from the total sample. This

involved the codification of 271 triple codes in total (Conversational Act, Therapeutic Topic and Content). Cohen's kappa was used for the analysis.

3.4.2 Use of Language

All the confirmatory hypotheses proposed are about the use of language. As mentioned above, all these hypotheses were publicly pre-registered in the Open Science Framework online repository (see Table 20) in January 2019. As these are confirmatory hypotheses, unilateral (one-tailed) levels of significance will be taken as valid.

Like all other studies, the descriptive analyses will be Pearson's chi-square tests (or their corrections) to compare two groups (grouped as presented in Table 20). All hypotheses related to proportions will be calculated using a two-sample Z-test ($Z \geq 1.64$, $p < .05$). Only two proposed hypotheses (c.4 and c.5) require a different analysis, in this case, a linear regression.

Table 20

Confirmatory and exploratory hypothesis of the analogous experiment

	Hypotheses
	a) What are the differences in the use of language between novice and expert therapists in the experimental task?
	SICOLENTE (language analysis)
a.1	The *shared information/new information* index value is higher in the novice sample than the expert sample. In this case, "shared information" is defined by the codes *Support* (S) and *Exploration* (E), whilst "new information" is defined by the codes *New information* (N) and *Exploration introducing new information* (I).
a.2	The *Weak supports/Strong supports* index value is higher in the expert sample than the novice sample. In this case, "weak support" is defined as the triad of codes in the SICOLENTE *Support-Neutral-Unspecific* (SNU) and "strong support" will be those triads of codes that have clinical value as for example: *Support-Problem - any category of the Content dimension*; *Support-Improvement - any category of the Content dimension*.
	Preset options
a.3	The proportion of the "change meaning" option is higher in the expert sample than the novice sample.
	*b) What are the differences in the justification for language used between novice therapists and experts? **
	c) What are the differences in the use of language between the two experimental conditions?
	SICOLENTE (language analysis)
c.1	The therapists will perform more *New Information* (N) codes after the client's *Reject* code (R) in the normal condition rather than in rejection. The therapists in the normal condition tend to try to provide new information more, since sometimes the client accepts it and sometimes rejects it.
c.2	The *shared information/new information* index value is higher in the rejection condition than in the normal condition.
c.3	The proportion of *Problem* (P) code is higher in the rejection condition than in the normal condition. The proportion of *Improvement* (I) code and *Goal* (G) code are higher in the normal condition than in the rejection condition. These results appear as a single hypothesis because it is an exhaustive and mutually exclusive categories system and these three codes exist in the same dimension (Therapeutic Topic).
c.4	The frequency of *New Information* (N) and *Exploration introducing new information* (I) codes tend to drop in the *rejection condition*. This decrease is expected since therapists will adapt so as not to lose the therapeutic relationship, that is, they will understand that the person still does not accept new information (the client always responds by rejecting - *Reject* code.)

Table 20 (continued)

	Hypotheses
c.5	The frequency of *New Information* (N) and *Exploration introducing new information* (I) codes tend to increase in the normal condition. This rise is expected since therapists will understand that the client feels understood (*Follow* code) and admits new meanings for his problem.
	Preset options
c.6	The proportion of the "change meaning" option is higher in the normal condition than in the rejection condition.
	d) What are the differences in language in the two experimental conditions based on the therapist's experience?
	SICOLENTE
d.1	There are no significant differences in the *shared information/new information* ratio between experts in the normal and rejection conditions. That is, little variability is expected to be found among the sample of experts based on the experimental condition.
d.2	There are significant differences in the *shared information/new information* ratio between novices in normal and rejection conditions. That is, we expect to find variability among the sample of novices based on the experimental condition

Note. * This question is exploratory and therefore no specific hypotheses are generated.

3.3.3 Justification for Language Use

Since the purpose of GT is to be a generator of new theories and hypotheses, an exploratory approach was proposed to study the relationship between justifications and the use of language, experience groups and experimental conditions.

Results

As an inclusion criterion, only participants who scored 7 or more in the credibility item were analyzed (i.e. participants who understood that the experiment credibly reflected the interaction and that the actor's performance was good), who claimed not to know the actor and who in their free answers did not use the conditional ("I would say that ...") or the third person to refer to the client ("He would benefit from..."). Only systemic therapists were analyzed to facilitate data convergence with the second study (Figure 7). The total sample analyzed includes 32 therapists: 17 novice therapists (9 in the *normal condition* and 8 in the *rejection condition*) and 15 expert therapists (8 in the *normal condition* and 7 in the *rejection condition*) (see Table 21).

The studied sample produced a total of 414 speech turns (227 in the sample of novices and 187 for experts). As shown in Table 22, the first exploratory analyses indicate that there are significant differences in the use of language based on experience (in the Conversational Act and Content dimensions) but not based on the experimental condition. The following section presents analysis and results for the suggested hypotheses.

Table 21

Descriptive analysis of the sample

Variables		Included participants N = 32(%)	Excluded participants N = 38(%)
Genre	Female	18 (53.3)	25 (65.8)
	Male	14 (43.8)	13 (34.2)
Experience	Novice	17 (53.1)	34 (89.5)
	Expert	15 (46.9)	4 (10.5)
Condition	Normal	17 (53.1)	18 (47.4)
	Rejection	15 (46.9)	20 (52.6)
Age	18-25	4 (12.5)	14 (36.8)
	26-35	8 (25)	16 (42.1)
	36-45	9 (28.1)	5 (13.2)
	46-55	7 (21.9)	1 (2.6)
	56-65	4 (12.5)	2 (5.3)
Main model*	Solution-focused	22 (68.8)	--
	Strategic (MRI)	7 (21.9)	--
	Structural	1 (3.1)	--
	Other	2 (6.3)	--
Secondary model	none	7 (21.9)	--
	Cognitive-behavioral	4 (12.5)	--
	Mindfulness	1 (3.1)	--
	Solution-focused	5 (15.6)	--
	Strategic (MRI)	7 (21.9)	--
	Narrative	4 (12.5)	--
	Other	4 (12.5)	--

Table 21 (continued)

Variables		Included participants N = 32(%)	Excluded participants N = 38(%)
Supervision	Yes	29 (90.6)	19 (50)
	No	3 (9.4)	19 (50)
Credibility*	7	5 (15.6)	3 (7.9)
	8	9 (28.1)	7 (18.4)
	9	10 (31.3)	8 (21.1)
	10	8 (25)	4 (10.5)

*Note.** The frequency of values excluded from the sample are not described, i.e. in the *main model* variable: the cognitive-behavioral, mindfulness, acceptance and commitment or other non-systemic value; in the *credibility* variable: values of 1-6. This data can be reviewed in Figure 7.

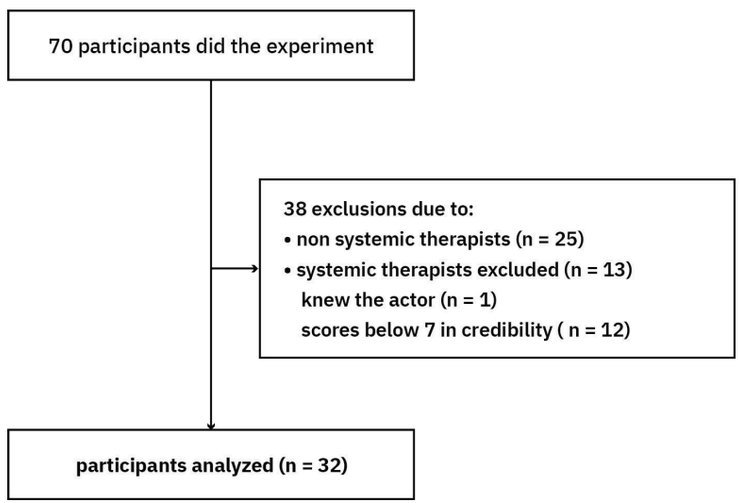

Figure 7. Experiment exclusion flowchart

Table 22

Difference in the use of language in the experimental task based on experience and experimental condition

		Experience				Experimental condition			
		Expert		Novice		Normal		Rejection	
		f	%	*f*	%	*f*	%	*f*	%
Conversational Act	Exploration	49	26.20	45	19.82	43	19.82	51	25.89
	Support	50	26.74	102	44.93	79	36.41	73	37.06
	New information	55	29.41	51	22.47	63	29.03	43	21.83
	Exploration INI	31	16.58	26	11.45	31	14.29	26	13.20
	Comment	2	1.07	3	1.32	1	0.46	4	2.03
		χ^2 (4, N = 414) = 15.025, *p* = .005				χ^2 (4, N = 414) = 5.978, *p* = .201			
Therapeutic Topic	Improvement	26	13.90	29	12.78	33	15.21	22	11.17
	Problem	76	40.64	113	49.78	98	45.16	91	46.19
	Goal	42	22.46	44	19.38	47	21.66	39	19.80
	Rules	2	1.07	4	1.76	2	0.92	4	2.03
	Neutral	13	6.95	14	6.17	14	6.45	13	6.60
	Mixed	28	14.97	23	10.13	23	10.60	28	14.21
		χ^2 (5, N = 414) = 4.828, *p* = .437				χ^2 (5, N = 414) = 3.439, *p* = .633			
Content	Behavior	9	4.81	14	6.17	13	5.99	10	5.08
	Thought	32	17.11	36	15.86	33	15.21	35	17.77
	Emotion	48	25.67	64	28.19	52	23.96	60	30.46
	Physiology	6	3.21	2	0.88	3	1.38	5	2.54
	Relationship	19	10.16	7	3.08	16	7.37	10	5.08
	Mixed	32	17.11	55	24.23	56	25.81	31	15.74
	Unspecific	41	21.93	49	21.59	44	20.28	46	23.35
		χ^2 (6, N = 414) = 14.206, *p* = .027				χ^2 (6, N = 414) = 5.978, *p* = .163			

Use of Language

The results obtained using Cohen's kappa index for the intra-coder agreement test were: .851 for Conversational Act, .792 for Therapeutic Topic and .685 for Content.

The suggested hypotheses and results obtained are shown in Table 23.

To present the results, hypotheses are grouped into three sections:

- Language differences based on experience (hypotheses listed with letter a).
- Language differences by experimental condition (those listed with the letter c).
- Language differences based on experience and experimental condition (hypotheses listed with the letter d).

Being confirmatory tests, all p values shown below are one-tailed or unilateral. If only one Z value is indicated in the result of a hypothesis, it is because the comparison was made with a 2x2 table. When analyzing the language with

an exhaustive and mutually exclusive category system such as SICOLENTE, the Z values obtained are equal, but with an inverted value (i.e. if a comparison takes the value of 2, the other possible comparison in the Table will be -2).

Differences in the Use of Language Between Expert and Novice Therapists (a)

These first three hypotheses are central to this study: differences in the use of language based on experience. According to the results of the previous study, it was hypothesized that experts would use more new information than novices (*New information* and *Exploration introducing new information* codes). The language used by novices would tend to explore, summarize and validate the client's information (*Support* and *Exploration* codes). It was also hypothesized that experts would differentiate themselves from novices in client validations, being shorter and more direct, without many formulations that seek to summarize the client (that is, more use of the triple *Support-Neutral-Unspecific* code).

Table 23

Hypothesis and results for the analogous experiment

		Expert		Trainees			
	Hypotheses[a]	***f***	**%**	***f***	**%**	**Z**	
a.1	The *shared information/new information* index value is higher in the novice sample than in the expert sample	99	53.5	147	65.6	2.49*	✓
a.2	The *Weak supports/Strong supports* index value is higher in the expert sample than in the novice sample	8	16.3	6	6.1	2.01*	✓
a.3	The proportion of the "change meaning" option is higher in the expert sample than in the novice sample	47	44.8	40	33.6	1.708*	✓
		Normal		**Rejection**			
		f	**%**	***f***	**%**	**Z**	
c.1	Therapists will use more *New Information* (N) codes after the client's *Reject* code (R) in the *normal condition* than in *rejection condition*	18	43	28	27	1.8*	✓
c.2	The *shared information/new information* index value is higher in the *rejection condition* than in the *normal condition*	122	56.5	124	64.2	1.602	×
c.3	The proportion of *Problem* (P) code is higher in the *rejection condition* than in the *normal condition*. The proportion of *Improvement* (I) code and *Goal* (G) code are higher in the *normal condition* than in the *rejection condition*	98	46.2	91	45.2	0.881	
		33	15.2	22	11.2	0.988	×
		47	21.7	39	19.8	0.154	
c.6	The proportion of the "change meaning" option is higher in the *normal condition* than in the *rejection condition*	52	43.7	35	33.3	1.588	×

Table 23 (continued)

Hypotheses[a]		Lineal regression results					
c.4	The *New Information* (N) code and *Exploration introducing new information* (I) code frequencies tend to drop in the *rejection condition*	$R^2 = .563$, $F(1, 7) = 9$, $p < .02$					×
c.5	The *New Information* (N) and *Exploration introducing new information* (I) codes frequencies tend to increase in the *normal condition*	$R^2 = .83$, $F(1, 7) = 34.096$, $p < .001$					√
		Normal		**Rejection**			
		f	**%**	**f**	**%**	**Z**	
d.1	There are no significant differences in the *shared information/new information* ratio between experts in normal and rejection conditions	45	46.4	54	61.4	2.039*	×
d.2	There are significant differences in the *shared information/new information* ratio between novices in normal and rejection conditions	77	64.7	70	66.7	0.308	×

Note. √ = hypothesis is accepted; × = hypothesis is rejected; [a] the values that appear in the frequencies and percentages are always those of the numerator of the ratio.
* $Z \geq \pm 1.64 = p < .05$

The analyzes indicate that hypothesis a.1 is accepted [X^2 (1, N = 409) = 6.200, p = .013]; novices' ratio of shared information/new information is 147/77 = 1.909 and experts' ratio is 99/86 = 1.151. The Z-test showed that the proportion of codes indicating that therapists work with shared information (*Supports* and *Explorations*) was higher in the sample of novices (Z = 2.49, p = .0064).

Hypothesis a.2 is also accepted [X^2 (1, N = 148) = 4.033, p = .047]. In this case, Fisher's exact test was performed because more than 25% of the cells had expected frequencies below 5. Novice therapists showed a higher proportion of *Strong support* (validations or summaries that specifically address the problem, progress or specific goals and content such as behaviors, thoughts, emotions or relationships) compared to expert therapists (Z = 2.01, p = 0.023). The ratios are 8/41 = 0.195 for the experts and 6/93 = 0.065 for the novices.

Hypothesis a.3 is accepted and the null hypothesis is rejected. Although the chi-square test did not find differences in the distribution of frequencies between the two groups [X^2 (1, N = 224) = 2.919, p = .088], the difference in proportions expected by the hypothesis is significant (Z = 1.708, p = .0438). These results indicate that the experts chose significantly more times the option that introduced information in the experimental task.

Differences in Language Use between the Two Experimental Conditions (c)

The following hypotheses were made regarding the operation of the experimental task. Given that the

experimental task modifies the client's behavior, therapists are expected to react differently in the two conditions created. It is expected that in the normal condition, therapists have conversations in which they try to introduce more changes, since the client accepts some, and, in the rejection condition, these attempts decrease, since the client always rejects what the therapist says.

Hypothesis c.1 states that therapists will tend to use more codes that introduce information after a *Reject* code from the client in the *normal condition* than in the *rejection condition*. This involved comparing the transitional probabilities of each condition. In the normal condition the probability was 43% while in the rejection condition it was 27%. This difference was statistically significant (Z = 1.83, p = .0336). Therapists are more likely to keep trying to change meanings in the normal condition, despite client rejections and qualifications.

The analyzes for hypothesis c.2 resulted in a non-significant chi-square [X^2 (1, N = 409) = 2.565, p = .067], and a comparison of proportions that was also not significant (Z = 1.602, p = .0546). With these results, the null hypothesis could not be rejected. The data indicates that there is no difference in the *shared information/new information* ratio between the two conditions. Ratios for each condition were 122/94 = 1,298 for the *normal condition* and 124/69 = 1,797 for the *rejection condition*.

Hypothesis c.3 could not be accepted either, since no differences were found in the Therapeutic Topic dimension between the two conditions [X^2 (1, N = 330) = 1.162, p = .577]. The proportions of the *Problem* code were 46.2% in the *normal condition* and 45.2% in the *rejection condition*. (Z = 0.881, p = .881). The *Improvement* code presented a proportion of 15.2% in the *normal condition* and 11.2% in the *rejection condition* (Z = 0.988, p = .1616). Finally, the proportion of the *Goals* code was 21.7% for the *normal condition* and 19.8% for the *rejection condition* (Z = 0.154, p = .4388).

In the following two hypotheses (c.4 and c.5) linear regressions were made to determine if the increase and decrease of the *New information* and *Exploration introducing new information* codes occurred as had been hypothesized. To do this, two variables were used: (1) the moment of the experiment (with values from 1 to 9) and (2) the total sum of frequencies of *New information* and the *Exploration introducing new information* codes for each of those moments (Figure 8).

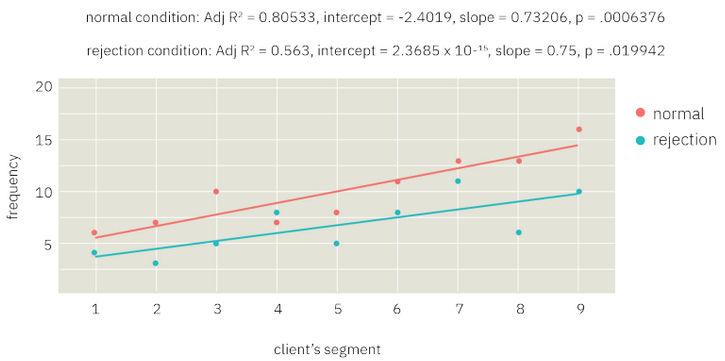

Figure 8. Linear regressions conducted for c.4 and c.5 hypotheses

For hypothesis c.4, a significant regression equation was found [R^2 = .563, F (1, 7) = 9, p < .02]. The frequency of *New information* codes increased by 0.75 with each trial of the experiment (β = .75, p < .02). The regression values are 0 + 0.75. Since it was hypothesized that there would be a decrease in code frequency that has not been observed, the alternative hypothesis could not be accepted.

With respect to hypothesis c.5, the linear regression presents the following values [R^2 = .83, F (1, 7) = 34.096, p < .001]. The frequency of *New information* codes increased by 0.732 with each trial of the experiment (β = .732, p < .001). The regression values are -2.402 + 0.732. These results support the hypothesis: during the course of the experiment in the *normal condition*, therapists increase their interventions aimed at introducing new information in the conversation with the client.

The last hypothesis in this section (c.6) stated that therapists would be more likely to choose options that introduced information in the *normal condition* than in the *rejection condition*. However, results do not support the hypothesis. The chi-square test is not significant [X^2 (1, N = 224) = 2.522, p = .073] and the comparison of proportions, despite being close to being considered significant, does not reach the preset values (normal condition: 43.7% and rejection condition: 33.3%; Z = 1.588, p = .0561).

Differences in the Use of Language between the Two Experimental Conditions and the Experience of the Therapist (d)

The last two pre-registered hypotheses considered both the experience and the experimental conditions. These display differences based on how expert and novice therapists react to the client.

The first hypothesis of this section (d.1) stated that expert therapists would be more “stable” in the way they act with the client and, therefore, no significant differences could be found between the two experimental conditions in the *shared information/new information* ratio. Results indicate the opposite; expert therapists differ in the two experimental conditions [X^2 (1, N = 185) = 4.158, p = .029], presenting a Z value = 2.039, p = .0207. Ratios were 45/52 = 0.865 in the *normal condition* and 54/34 = 1.588 in the *rejection condition*.

The last of the pre-registered hypotheses (d.2) could not be accepted as no differences were found in the ratio of *shared information/new information* between novices who worked with the *normal condition* and those who worked with the *rejection condition* [X^2 (1, N = 224) = 0.95, p = .434; Z = 0.308, p = .7578]. Ratios were 77/42 = 1,833 in the *normal condition* and 70/35 = 2 in the *rejection condition*.

Justification for Language Use[6]

The final categories system that was arrived upon can be seen in Figure 9. The system was constructed using two groups of categories: a first group focused on the form of justifications (how they are) and another group focused on what they include (their content). The categories were collapsed together to obtain a more parsimonious and simple system.

The first group, *Form*, respond to the question "was this answer a justification?", with two possible answers: and consists of two possibilities, whether or not it is a justification. If there is no reason, it is coded as *Without justification*. It is understood that there is no justification when the participant:

- paraphrases his/her intervention or justifies tautologically: “How long have you been like this? [...] I asked him this because I want to know how long he has been like that”.

6. Because of translation, it is often difficult to demostrate the criteria explained below. We have tried to keep the structure and content of the Spanish transcription in the translations.

- explains what he/she has done but does not explain why: “I made a summary”.

- explains that he/she has no reason: “I said this just because”.

- forgets to give the reason and there is no record in the experiment, i.e. I t is missing data.

When the participant has justified their intervention, it can be *complete* or *simple*.

To determine if it is a *complete* justification, it is checked for words such as “for, because, as a, to, then, so” or simply “the reason is, my justification is”. For example, a therapist may say “I made a summary to validate him”; “The reason is that I want to clarify what he is telling me”; “I asked that question so he can tell me about his family”.

All other reasons given were simple, that is, participants justify their intervention without the explanation being considered complete, but also without meeting the criteria that would define the explanation as not being a justification. For example, a simple reason would be for the participant to say, “to validate,” “objectives,” “implement exceptions.” We decided to

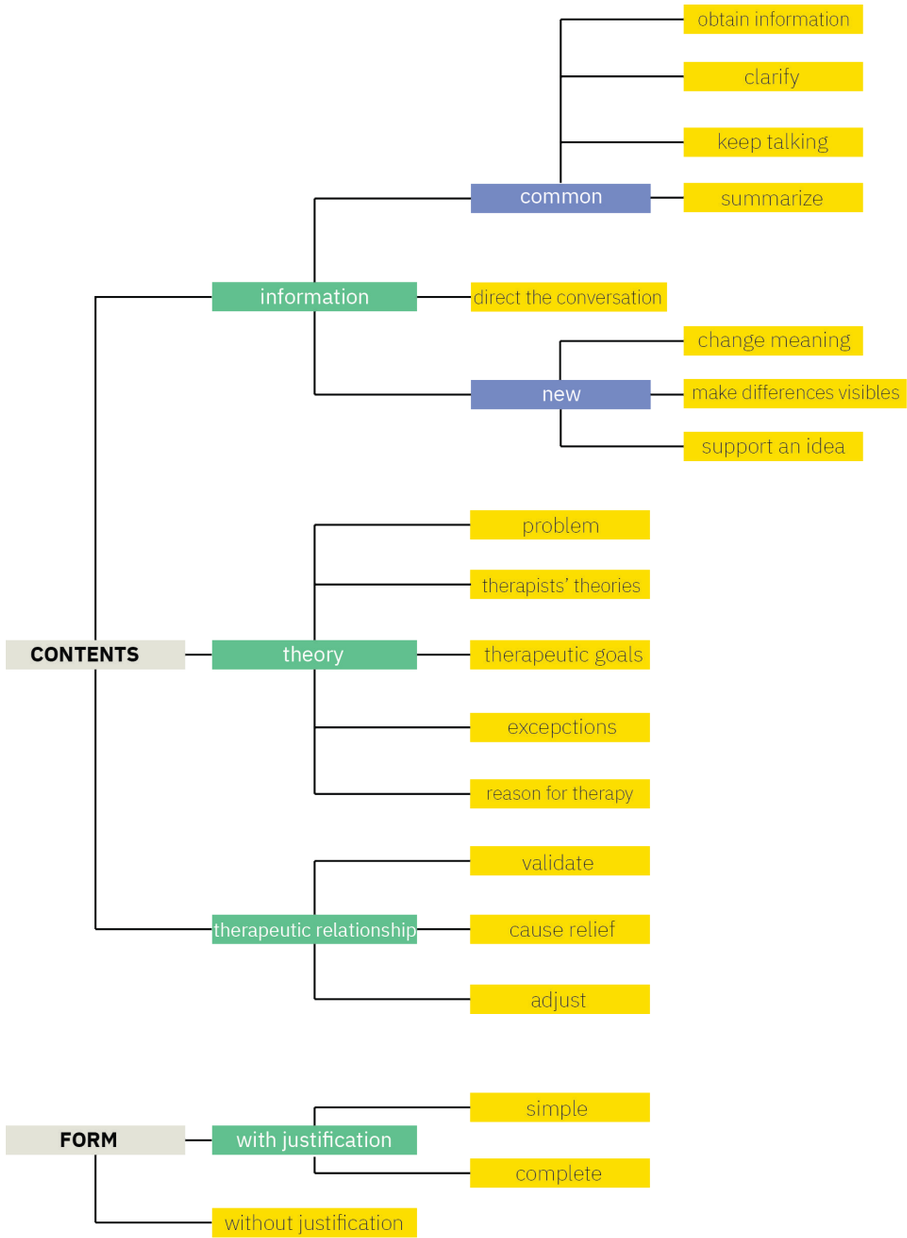

Figure 9. Categories system developed from Grounded Theory.

codify only those reasons that in the Form dimension presented a Complete or Simple justification.

The second group, *Content*, consists of three superordinate categories: (a) therapeutic relationship management (b) information management with the client and (c) theories and first session operation. Each category has subcategories that ultimately investigate the participants' justifications.

These categories and subcategories are listed below with their results, descriptions and examples with at least one expert and one novice. In brackets, each subcategory shows the number of participants who used that justification. The number of times each code appeared in the investigation can be found in Table 24 and the percentages of each superordinate category in Figure 10.

Codes are presented from most to least used by therapists. The reasons presented as examples have been randomly selected. The underlined segments are the justification.

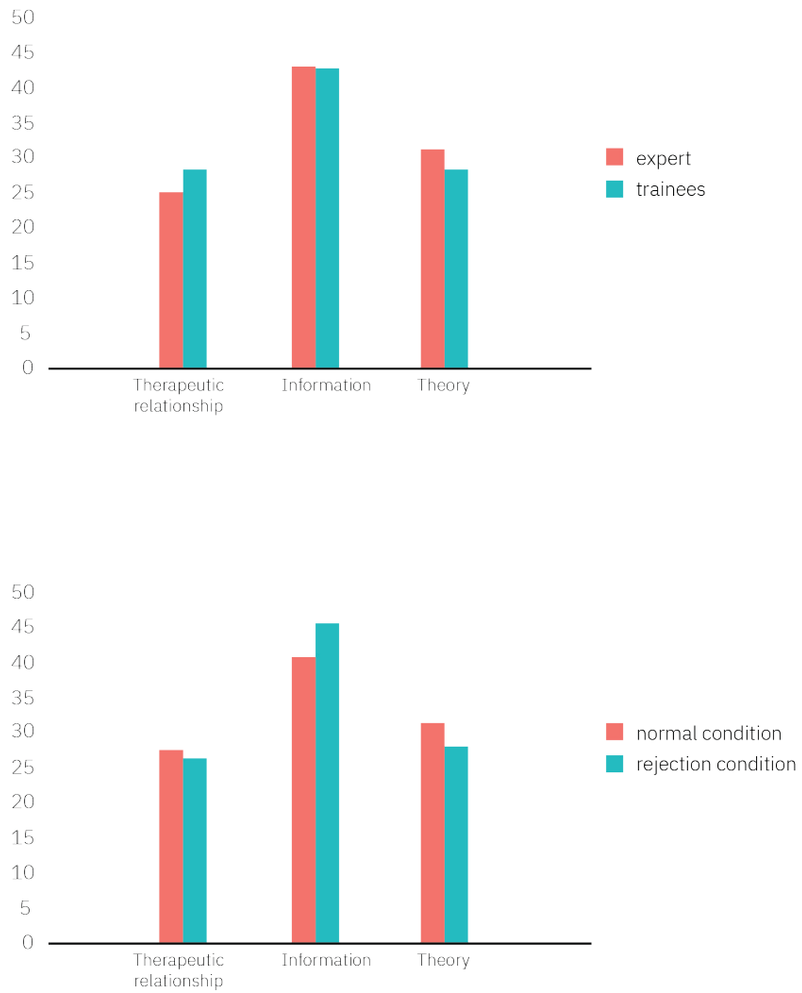

Figure 10. Percentages of the three categories of Content group.

Category 1: Therapeutic Relationship Management

This category includes all language justifications aimed at maintaining the relationship with the client or creating a better one by trying to understand him. These are all the explanations where the therapist focuses on relational aspects and does not mention theoretical or technical aspects. Therapists used these justifications a total of 48 times (28 times for novices and 20 times for experts). Novices have an average of 1.33 uses per therapist, with a range of 0 to 3 and the experts an average of 1.82 and a range of 1 to 3.

Validate the client (25 therapists: 10 experts and 15 novices).

Using language to make the client feel understood. The goal of therapists was to "put themselves in their shoes", be empathetic with the client and show that they are understanding what he says. For example:

> *Well again there is a ... I identify the presence of a new emotion or a ... something that definitively is negative... and he also worries about the suffering it generates in others and... I think I have to support him and validate him.*

Table 24

Frequencies and percentages of justifications provided by participants by category groups

		Experience				Experimental condition			
		Expert		Novice		Normal		Rejection	
		f	%	*f*	%	*f*	%	*f*	%
	Without	19	14.07	24	15.69	29	18.95	14	10.37
	Complete	72	53.33	109	71.24	93	60.78	88	65.19
	Simple	44	32.59	20	13.07	31	20.26	33	24.44
Form's totals		135	100	153	100	153	100	135	100
Therapeutic relationship management		2	1.18	3	1.61	3	1.63	2	1.17
	Validate	20	11.83	33	17.74	35	19.02	18	10.53
	Adjust	11	6.51	10	5.38	4	2.17	17	9.94
	Cause relief	10	5.92	7	3.76	9	4.89	8	4.68
Information management									
shared information									
	Obtain information	14	8.28	18	9.68	16	8.70	16	9.36
	Clarify	15	8.88	21	11.29	15	8.15	21	12.28
	Encourage the client to talk	13	7.69	12	6.45	9	4.89	16	9.36
	Summarize	1	0.59	6	3.23	3	1.63	4	2.34
	Direct the conversation to	10	5.92	6	3.23	11	5.98	5	2.92
New information									
	Make difference visible	4	2.37	7	3.76	3	1.63	8	4.68
	Change the meaning	11	6.51	3	1.61	11	5.98	3	1.75
	Support an idea	5	2.96	7	3.76	7	3.80	5	2.92

Table 24 (continued)

		Experience				Experimental condition			
		Expert		Novice		Normal		Rejection	
		f	%	*f*	%	*f*	%	*f*	%
Theory and first session operation		6	3.55	0	0	5	2.72	1	0.58
	Exception and resources	13	7.69	13	6.99	18	9.78	8	4.68
	Objectives	12	7.10	10	5.38	9	4.89	13	7.60
	Problem	9	5.33	11	5.91	7	3.80	13	7.60
	Own theory	8	4.73	9	4.84	9	4.89	8	4.68
	Reason for therapy sessions	5	2.96	10	5.38	10	5.43	5	2.92
Content's totals		169	100	186	100	184	100	171	100

> *I say this to empathize with him so that he feels that, well I am... well..., rather, what I try to tell him is that we all have reasons to be sad sometimes*

Adjust to maintain relationship (12 therapists: 6 experts and 6 novices).

Reacting to what the client previously said or answered. In the experiment, it always involved a therapist's reaction to something the client said (e.g. disagreement), showing that he has not felt understood.

For example:

> *Well, as he said no to a question I asked, I'm trying to show him that I rectify my opinion and that I am understanding him again. Also, because now I don't know... I had the view that he wanted to be happy again and now, from what I see, what he wants is to handle his problems differently... well, I don't know, but ... I'm trying to understand him all the time.*
>
> *Well, I'm back ... I 'm back to the objectives again because he seems to give me the possibility to investigate*

Cause relief in therapy session, normalize the situation (11 therapists: 4 experts and 7 novices).

This justification implied that the purpose of the language used was to offer the client comfort, to give him hope about his improvement. The justification was related to making the client see that what is happening to him is a natural, daily response in line with the situation he is experiencing; his emotional response and concerns are normal. For example:

> *I say this to empathize with him so that he feels that, well I am... well..., rather, what I try to tell him is that we all have reasons to be sad sometimes*

> *I ask him this a little to guide him in a certain direction, toward goals and to... to generate a more positive situation*

Category 2: Information Management with the Client

This category included all justifications used by therapists related to managing, obtaining, changing or introducing information. These reasons refer to the conversation, the dialogue taking place between therapist and client. The information may or may not be related to the theoretical content (the third category). Therapists have used these reasons a total of 98 times (51 times for novices and 47 times for experts). Novices have an average of 3 uses per therapist, with a range of 1 to 7 and experts have an average of 3.13 and a range of 1 to 6.

Obtain more information (20 therapists: 9 experts and 11 novices).

This justification implied that therapists wanted to collect more information about what was happening to the client. These were all the reasons therapists gave about the client's evaluation and his situation. This code tends to appear together with others in the third category (theoretical and technical concepts). For example:

> *And I ask this to explore his relational context and assess sources of support he has tried and sources of support that could be mobilized to help him now.*
>
> *I would tell him this because I understand that in his mind... he thinks he should have certain things for his age to feel fulfilled and he doesn't have them yet. And I want to see what those things are that are missing, what he feels is missing*

Clarify the information (17 therapists: 8 experts and 9 novices)

This justification involved obtaining more information, particularly about an aspect that had not been clear to the therapist. This code was also used when therapists wanted to objectify behaviors, or understand the specific meaning for the client of a word in particular. For example:

> *Because I want him to keep on explaining more, right? Because it is not quite clear to me, right? What has been happening and what was especially difficult in recent months, for him to feel that he is ... feel that things have gotten worse, right?*
>
> *I'm still trying to clarify what he wants*

Encourage the client to keep talking (17 therapists: 8 experts and 9 novices)

This justification was codified when therapists said they used language to keep the client talking and providing information and new data. It did not imply that therapists wanted more information about something specific, but rather that the client continue his story. For example:

> *mmmh ... a summary ... I have made a summary ... to get him to keep telling me about the problem*
>
> *To give him the opportunity to talk about something he has said before*

Summarize client information (6 therapists: 1 expert and 5 novices)

The reason here was that therapists wanted to verbalize a summarized version of what the client had previously said. For example:

> *I tell him this to outline what he has told me and see if I have understood correctly*
>
> *I say this to summarize and emphasize that there is the possibility of finding another way*

Direct the conversation (11 therapists: 7 experts and 4 novices)

Therapists justified their language by saying that they were causing the conversation to focus either on new topics or on previous topics that had been discussed, but not in the depth they would have liked. For example:

> *Well again I take advantage of the fact that he is talking about what he wants to change, what needs to be different, to guide the conversation more towards what we have to start working toward*
>
> *The reason is to redirect this conversation a little toward slightly more positive aspects, so he can see the possibility to become what he wants*

Make differences visible (10 therapists: 4 experts and 6 novices)

This is the first subcategory (along with the remaining two) in which the justification implied a change of meaning, adding information to what the client said. Participants who used this category to justify their use of language sought to generate a comparison between two elements: two different versions of the client (i.e. the good and the bad, his true self and who he is now), distinguish

between person and situation or differentiate two specific moments (past and present). For example:

> *The reason for this comment is to differentiate between the situation he is living and how he really is, what he is experiencing is a transitory situation*
>
> *I say this because he has already given many clues about the objectives he wants to achieve and it is a way that is clear to both of us, and also to let him know that he really is a true Alejandro who is going through a bad time so if we manage to separate... we manage to make the real Alejandro resurface by separating him from the problem he has now, we will find a better identity*

Change the meaning for the client (9 therapists: 6 experts and 3 novices)

Therapists said they use language to change the way the client understands the problem. In this respect, their justification made no reference to any specific change, only that it was a different point of view. As the solution-focused model is the most used in the sample, many changes were expressed by referring to giving the client control over his actions. For example:

> *I keep trying to confront the image he projects of himself, of an invalid and problematized person*
>
> *Again, a vision that moves us in trying to make the client progress beyond seeing his depression as something purely wrong, a symptom or pathology... to give him his functionality in his changing relational context*

Support a client idea (9 therapists: 4 experts and 5 novices)

This subcategory was defined as any justification referring to the therapist's attempt to reinforce a client's point of view, to highlight a specific aspect that the client has verbalized as therapeutic or useful in the treatment. For example:

> *I explain that, well it seems to me... to underline that a little, right? The fact that he is not like that and support the idea that this is momentary*
>
> *I say this because I would have to take a step back because he has not "bought" the idea that he has really lost himself and I have reinforced the idea that he does not want to worry others*

Category 3: Theories and First Session Operation

This category includes all the reasons that therapists give when they justify their language by naming a specific technique, the approach of a theoretical model (psychotherapeutic or the therapist's own) and the theoretical development of a first session. These codes are related to the sample investigated, i.e. as they are all systemic therapists, the subcategories will largely reflect the theoretical assumptions of the different systemic models used by participants. Therapists used these justifications a total of 63 times (34 times for novices and 29 times for experts). Novices present an average of 2 uses per therapist, with a range of 0 to 4 and experts have an average of 1.93 and a range of 0 to 4.

Working on the client's exceptional moments without the problem and his/her resources (16 therapists: 8 experts and 8 novices)

Participants justified their language by referring to a technique in the Solution-Focused model (De Shazer, 1985) that asserts the relevance for therapeutic results of investigating and talking about moments when the problem does not appear, occurs with less intensity, or

when something is simply different. Also included along with these exceptions are times when therapists justified that they said what they did as a way of working with prior resources (social skills, the client's skill set, useful knowledge, etc.). For example:

> *I ask him to look for those exceptions, what was different*
>
> *I would say that as ... as an empathic response and to explore the resources he has right now*

Working on therapeutic goals (13 therapists: 7 experts and 6 novices)

Just like the previous reason, this is also framed in the solution-focused model. In this case, therapists justified their language by pointing out that they used said language to work toward the client's goals. For example:

> *I ask this question to talk about his objectives*
>
> *I ask this question now to try to direct him toward his objectives*

Work on the client's problem (13 therapists: 3 experts and 4 novices)

This subcategory includes justifications referring to the cause of the problem (to know it, understand it), the

temporality of the problem (when it will pass, how long it has been going on) and in general any reason that therapists gave to modify or stop the problem. For example:

> *...and I ask that because I think it is important to place it within the temporal context when the symptomatology begins*
>
> *I still want to validate his emotion and, at the same time, leave the door a little open so he can continue telling me about any other factors that are influencing his sad emotions*

Therapists' theories and mind readings (12 therapists: 6 experts and 6 novices)

This subcategory collects all the justifications therapists use by proposing their own ideas about how the human being works, based on their clinical experience or working hypothesis. Also included were justifications for language that approached how the client felt, or the client's thinking without him verbalizing those aspects. For example:

> *I would tell him this because I understand that in his mind... that he thinks he should have certain things for his age to feel fulfilled and he doesn't have them yet. And I want to see what it is that is missing, that he thinks is missing*
>
> *I think it is very difficult to recognize or talk about how you feel, sometimes it causes embarrassment, I think, this kind of statement, and I consider it important to offer an initial comment expressing that I understand and that it must be very confusing, disconcerting or complicated ... well, that I understand and I appreciate that he recognizes it, and talks about it*

Working on the reason for therapy (9 therapists: 3 experts and 6 newbies)

Lastly, this category included justifications referred to knowing, understanding and negotiating the client's reason for going to therapy. For example:

> *I'm doing this to explore... summarize a little and explore... see if I can clarify what he needs a little more*
>
> *The reason, well... is to see if I understood what he's telling me and to establish what he demands*

Chapter 6: Discussion

The main objective of this study is to analyze differences in how expert and novice therapists use language. The aim is to obtain relevant information that can be applied in training contexts. The linguistic analysis was carried out thanks to the SICOLENTE instrument, developed in the first study of this dissertation. The language of experts and novices was investigated in two different contexts: in a naturalistic setting and in an analogous experiment.

This discussion section focuses on triangulating data from these last two studies and determining which aspects seem to be characteristic of the language used by experts and novices. Before we do so, the following is a brief

discussion of the data collected from each individual study.

Study 1: SICOLENTE

The main objective of this study was to present the SICOLENTE instrument and to examine its psychometric characteristics. The final categories were nested in three dimensions: Conversational Act, Therapeutic Topic and Content. Reliability and construct validity properties were investigated in two studies to warrant the use of this instrument in scientific research.

The inter-coder reliability indices obtained are excellent according to the criteria used, and this is true of each of the three dimensions of the instrument and its corresponding categories. Equivalent results were obtained when calculating intra-coder reliability. The conclusion is that well-trained observers, with a manual and a training program, obtain equivalent results and that these remain constant over time. It should also be noted that when working with a single coder instead of a team, the inter-coder score remained stable, which reduces the workload while maintaining the quality of the work. The analysis carried out on the basis of the G-Theory allows us

to confirm that the variability of data obtained is associated with the categories and not with other aspects (observers or residual); that is, the differences found are due to the instrument and not to the observers who applied it.

Regarding the instrument's construct validity, this was verified by testing the ability of the SICOLENTE to differentiate therapists from five different models in terms of code proportion and code relationships, based on evidence from previous studies that show the influence of theoretical models on the language used by therapists (Korman et al., 2013; Stiles & Shapiro, 1995; Tomori & Bavelas, 2007). Results have allowed us to accept most of the hypotheses presented. In particular, the SICOLENTE instrument detects clear differences between the two modern therapists, and eight of the nine hypotheses were accepted (88.89% accepted). In the Conversational Act dimension there is no difference in their use of Support (S), which is the dimension upon which the therapeutic relationship is created. However, differences were found in the work strategy; the CB therapist showed more *Exploration* (E) while the SF therapist initiates considerably more interactions to change meanings (N, I).

In the Therapeutic Topic, both therapists behaved according to the model. In particular, the CB therapist focused more on conversations about the problem (P) and the SF therapist referred more often to *Goals* (G) and *Improvements* (I). In terms of the third dimension, the results for Content support one of the predicted hypotheses, that is, the CB therapist speaks more of *Thoughts* (T), although the SF therapist failed to show a higher proportion of the *Relationship* code (R). This last result could be due to the fact that all the cases analyzed are individual cases.

The results are less clear regarding the analysis of the three classical therapists. In spite of this, 11 of the 15 hypotheses were accepted (73.34% accepted). Rogers differs from Ellis in that he was more concerned with validating the client (S) while Ellis introduced more new meanings (N, I) and focused the conversation more on the problem. Perls, on the other hand, appeared to behave more like Ellis than Rogers, since he was more concerned with creating new meanings (N, I) rather than validating his client (S). These results are consistent with those obtained in previous research, in which Perls' performance is characterized as challenging and

confrontational (Corsini & Wedding, 2011; Hill et al., 1979; Mercier & Johnson, 1984). This discrepancy between model and practice can be explained by the small sample size used or by the context of the record, which centers on performance and encourages therapists to demonstrate the efficiency of their model in a short space of time. None of the humanistic therapists appeared to be particularly interested in highlighting the positive aspects (*Improvements*) of their clients, as might be expected a priori when working with models based on the idea of self-realization; an aspect that appears to be central to the performance of the SF therapist. The results obtained, although not hypothesized, are in line with those described by Tomori and Bavelas (2007), who compared the language of two SFT therapists with that of two CCT therapists and found that while SFT therapists construct conversations centered around positive aspects (*Goals* and *Improvements*) CCTs focused their conversation on the problem.

One question that arises when analyzing the results is: why do modern therapists seem to behave more in line with their models than classical therapists? To begin with, as already mentioned, the context of the TAP recordings

(Shostrom, 1965) encourages personal recognition, and it detaches the therapist's performance from the theoretical model. Moreover, in recent years, therapy has been manualized (one of the modern therapists is the author of a brief therapy manual in Spanish) so it is more likely that the therapists of the validity study will be more faithful to the guidelines of the model they follow.

Study 2: Expert and Novice Therapists in Naturalistic Settings

To our knowledge, this exploratory study was the first to compare trainee-client communication and expert-client communication in actual therapy sessions with the same client.

Results showed that the expert therapist performed more interventions intended to modify the clients' meaning than the trainees did. Trainees spent most of the session performing summaries, exploring questions and using backchannels. Furthermore, when the trainees did intervene to modify meanings (e.g., using reframing, deconstructions or establishing new relationships with prior information), clients were significantly more likely to reject this change according to sequential analysis results.

On the other hand, the sequential analysis of the expert-client interaction did not present statistical significance, that is, the statistical calculations could not find an interactional pattern beyond that expected by chance. However, as discussed in the Results section, this data should be interpreted with caution.

The chi-square test is not significant in this case because the low frequency of the Reject code prevents calculation in the expert-client interaction. However, the fact that this code does not appear indicates that practically all the new information suggested by the expert therapist was accepted by clients. Overall, the expert provided more new information than trainees, and this information was accepted on practically every occasion.

We might therefore provide two suitable explanations for our results showing client refusals in the trainee-client interaction: they could be understood as evidence of the difference caused by experience, but also as a sign of a bad session seen by the expert, explaining why he decided to enter.

More detailed research is needed to understand how the new information-rejection interactions work, since

this process could be helpful in shedding light on research with bad outcomes, but also on how the therapist reacts to these moments (Muntigl & Horvath, 2014).

When observing the answers therapists gave to these rejections, sequential analyses were not significant, again due to the low frequency of codes. We did observe, however, that the main response novice therapists gave after receiving a rejection from the client was to support what the client said. An example of this can be seen in the following trainee-client interaction. The therapist is asking about client exceptions. Language between brackets indicates that both participants overlap when speaking:

> *(1) T: One more thing Julian, we would like to ask if ... it ever happens that you... are there moments in your life when you feel closer to saying "hey, well, I'm close to feeling better, today I'm, like, a little more active, a little more positive"*
>
> *(2) C: No, I really never feel like that [and ...] I'm always negative like this...*
>
> *(3) T: [Never]*

The novice therapist asks a question with a weak

presupposition (using the conditional and asking a closed question) about the existence of moments of improvement. After the client's blunt response, the therapist did not explore these advances again; he accepts what the client has said through a formulation that presents an exactly preserved word. MacMartin (2010) found a similar response in the sample of systemic novices she investigated. Among the possible linguistic strategies, as in our trainee's example, some novice therapists in her sample simply accepted the client's disagreement with the presupposition and changed the subject. On other occasions, they tended to accept what the client had said to reject them and tried to "recycle" the words of rejection into new questions.

It might seem so far that this “skill” is a specific part of the solution-focused model as both studies coincide in their theoretical model. However, Peräkylä (2011) found the same strategy among psychoanalytic therapists; when clients disagree with some interpretation, therapists tend to include more words and phrases spoken by the client in their "reinterpretation". Therapists try to somehow maintain a relationship in which they collaborate with the client, looking for middle ground between “shared

information", that is, what the client says that happens to him or her, the therapist's exploration, and the new information therapists must introduce to produce changes, that is, new presuppositions, about the problem or solution. This balance implies showing support and understanding of the client's information, while the therapist also displays a subtle "disagreement" when introducing new information (Weiste, 2015).

Concerning the second dimension, Therapeutic Topic, results indicate that trainees spent more time engaging a solution-focused interview, talking about exceptions and client resources (*Improvement* code). Compared to this, there was a statistical difference with the expert who also engaged a solution-focused interview, but rather than to talk about exceptions or resources, he sought to talk about goals (*Goal* code). The expert doubled the percentage displayed by novice therapists in the use of this code (18.4% and 9.2%, respectively), although in absolute terms, their frequency was similar (120-126). One possible explanation for these results, considering that our sample was the first or second session of treatment, is that the expert entered to clarify the direction of the treatment. Having clear and agreed goals

is part of Bordin's definition of a working alliance (1979) and, therefore, is part of a therapeutic relationship and a successful treatment (Norcross, 2010).

We also found in this dimension that the expert talked more about the client's problem than trainees. In this case, the expert therapist seems less "solution-focused". These results may be caused by the tendency shown by expert therapists to adhere less to the therapeutic model (Tschuschke et al., 2015), or by the fact that he is working with the integrative model that he teaches trainees (see Method for Study 2), and he is therefore investigating the problem as stated by the MRI model (Fisch et al., 1982).

Finally, in this dimension, the differences found in the *Mixed* category could be due to the fact that the expert therapist performs longer interventions, and therefore combines negative and positive aspects in his speech, causing the appearance of this code.

Results in the Content dimension suggest the expert talks more about cognitions, and trainees talk more about client behaviors and emotions. These latter results may be due to the main psychotherapy model used (de Shazer, 1985) and the tendency of novice therapists to validate

and make empathetic comments.

We must also note that strong similarities were found in both interactions (trainee-client and expert-client interactions) and in either direction (therapist-client and client-therapist) in the second and third dimension. Results show a tendency for clients to respond with the same topic and content that the therapist has used and vice versa. These results converge with findings in Smock-Jordan et al., (2013); our results are mainly similar in the interaction although the conceptual definition of categories was different. In contrast to Smock-Jordan et al., (2013), our research used sequential analysis rather than isolated chi-squares. This allows our research to provide the conditional probabilities of these interactions as well as being closer to the interaction researched.

A feasible explanation for these interactions would be that conversation is naturally sequential, so these results are just highlighting this phenomenon (Bavelas et al., 2017, Clark, 1996). This explanation could mean that we are overestimating our results, consequently a different analysis should be conducted to correct this bias (Connor, Fletcher, & Salmon, 2009; Hollenstein, 2013; Jurafsky & Martin, 2018). Another possible explanation is that the

expert has acted as a model for trainees, who are replicating what they learnt from him. This last explanation would also need a broad design where trainees of different models were analyzed.

Lastly, another plausible explanation to our results is that the expert is not only being responsive to the client's needs but also to the previous trainee's performance. Given this, the expert's results could be elicited by both client and trainee. For example, differences in the Therapeutic Topic and Content dimension could be related to this reaction in the expert therapist to the previous dialogue between the trainee and the client.

Study 3: Analogous Experiment

The main objective of this study is to investigate the language of therapists in a controlled context. To do this, the natural conditions of the therapist-client interaction are replicated with the greatest possible likelihood (greater external validity) while maintaining the primary internal validity characteristic of the experiments. To ensure the external validity of results, only participants who have assessed the experimental task with a 7 or more on a credibility scale of 1 to 10 have been analyzed.

Although the sampling could not be random (since we only needed psychotherapists) the assignment to the conditions was. The participants were blind to the conditions, which were only explained after finishing the study.

As far as we know, this is the first study that has aimed to study the language of psychotherapists along with intentionality in an experimental context. For example, the Facilitative Interpersonal Skill performance task (FIS; Anderson & Patterson, 2013), focuses on assessing how therapists react to complicated cases. The experimental task presented here does not evaluate therapists' performance, but rather how they used their language. In addition, the task does not present disjointed vignettes such as the FIS, but, when focusing on the interaction, the nine fragments presented belong to the same treatment (with the same client and pathology). Other analogous tasks such as the ClientBot (Tanana, Soma, Srikumar, Atkins, & Imel, 2019), which focused on the training of novice therapists, achieved greater interactivity and were more similar to a natural conversation thanks to the fact that participants communicated with a fictional client through writing, without visual stimuli. The task discussed here combines the presentation of vignettes, as tasks similar to FIS, with the interactional aspects of tasks such as ClienBot.

To organize the results discussed on the study of language, findings were grouped into (1) differences based on experience and (2) differences based on experimental conditions.

Differences in Language Use

The differences found in our experiments indicate that novice therapists use more language to support and explore what the client proposes while experts introduce more new information. These differences are found both when therapists freely choose what to say, and when they select among the preset response options. In addition, novices often make empathic comments and longer validations than expert therapists (hypotheses a.1, a.2 and a.3). As in Study 2, novices tend to focus on maintaining the (therapeutic) relationship with the client and making them feel understood (*Support* code), while exploring the content of what the client expresses (*Exploration* code), and experts tend to suggest more changes and new ideas to clients (*New information* and *Exploration introducing*

new information). In the next section of the discussion, this convergence of results is examined in greater detail.

The results of hypotheses d.1 and d.2 state that expert therapists would not be affected by experimental conditions as much as novices, and therefore, they would not modify their language as much. The logic behind this was that experts would not "suffer" the client's rejection as much and, thanks to their experience, they would continue without much change in their language or performance.

In the novice sample, however, we expected that the rejection condition would lead to a decrease in attempts to change meanings. Data shows the opposite: experts do modify their language based on the experimental condition, presenting a lower proportion of *New information* in the *rejection condition* (38.6%) than in the *normal one* (53.6%), while novices barely modified their proportions of *New information* (35.3% in *normal* and 33.3% in *rejection*). These results could be indicating a relevant difference at the clinical and training level. One possible explanation for these results is that expert therapists are more responsive to rejections and, therefore, better able to adjust to the client's needs.

If we look at these results together with those obtained in the first hypotheses, it would imply that experts introduce more changes of meaning and would also have a greater ability to perceive if the client does not collaborate, altering their language to adapt to this. This ability to adjust is currently being investigated and proposed as a variable of interest to understand the effectiveness of treatments and therapist expertise. (Norcross & Wampold, 2018; Stiles & Horvath, 2017).

Regarding language differences based on experimental conditions (hypothesis c.1, c.2, c.3, c.4, c.5, c.6) only two hypotheses (c.1 and c .6) could be accepted. These results suggest at least two possible explanations: (1) the experimental conditions are not sufficiently well differentiated and therapists do not perceive the interaction they were intended to reproduce or (2) the conditions are differentiated but therapists do not modify their language in response to conditions or, in other words, they do not change their language despite the interaction.

Since experts do modify their language based on the experimental condition, the second explanation seems more accurate. For example, the results of hypotheses c.2

and c.6 present values close to the levels of significance proposed in the analysis plan. This could be an indication that, with larger sample sizes, the hypotheses might have been accepted.

Hypothesis c.3 was rejected as no differences were found in the Therapeutic Topic dimension between the two conditions. This negative result could be an indirect proof that the script is designed to modify aspects of the first dimension of SICOLENTE (Conversational Act) but not of the other two dimensions (Therapeutic Topic and Content). Another way to understand these results is that, although the client rejects, clarifies or shows disagreement, therapists talk about the topics preferred by the therapeutic model, or on the contrary, all participants chose to talk about the topics raised by the client.

On the other hand, the accepted hypothesis c.5 and the rejected c.4 show that there are no differences between the two experimental conditions, specifically in the use therapists made of the *New information* and *Exploration introducing new information* codes. There is a tendency to increase the frequency of these two codes over the course of the experiment. Unfortunately, this had only been hypothesized for the *normal condition*; in the

rejection condition, the use of these codes was expected to decrease over the course of the experiment. The combined data indicates that therapists increase their attempts to introduce information over the course of the session. One possible explanation for this behavior is that, as time goes by, the pressure to do something that produces changes increases. Heinonen (2014) found that stress in the first sessions was more characteristic in brief systemic treatments such as solution-focused therapy, since it is understood that the therapist should initiate changes promptly.

To finish analyzing the language use results in this set of hypotheses, c.1 was accepted: in the normal condition, therapists showed higher transitional probabilities between *Rejection-New information* codes. Therapists are more likely to keep trying to change meanings in the normal condition, despite client rejections and qualifications. This may be indicative of the fact that the normal condition was acting as an intermittent reinforcement for participants, causing these higher proportions. The hypotheses focused on the code that introduces information because we assumed that all participating therapists considered the use of language for

relational aspects as necessary but insufficient to provide therapeutic help; introducing new information is also required. This could explain why, when interacting with the less collaborative version of the client, participants were somewhat more cautions and did not insist as much on changes, but preferred to focus on the relationship, through questions and validations.

Combined results seem to show that there are differences between experts and novices in how they use language (a.1, a.2, a.3) and how they interact with the client (d.1, d.2). In addition, despite the rejections, our participants (in general) were more insistent with their proposals for change depending on how the client interacted (c.1). Non-accepted hypotheses indicate that therapists do not alter the topics they address despite the change in interaction with the client and that in general, therapists introduce more information the longer they have been talking with the client, also regardless of the condition of interaction (normal or rejection).

Differences in Language Intentionality

Language justifications were studied as an exploratory investigation through the Grounded Theory (Charmaz, 2006; Glaser & Strauss, 1967). It was therefore decided we would not perform any type of quantitative statistical analysis and take this section as a first approach to the research topic.

The main idea behind studying the intentionality of language was to verify that, in the event that there were no differences in "what" therapists do (the use of language), we could know a little more about "why" therapists do what they do (intention). In this way, we could determine if:

1. They use the same language and have the same reasons to use it
2. They use the same language, but they have different reasons
3. They use different language, but they have the same reasons
4. They use different language and have different reasons

These study's results would indicate that we should only consider the last two possibilities.

In general, we observed that the vast majority of language justifications are about the dialogue between therapist and client, and the information therein exchanged, regardless of experience (43.2% experts and 43.01% novices).

Language justifications (the second category *Managing information with the client*) include reasons like summarizing the conversation, directing the conversation, introducing new information, obtaining prior information or clarifying something the client has said. A possible explanation for these results is that, as many of the therapists in our sample use a constructivist systemic model, this may bring about greater attention to linguistic aspects (Bavelas, 2012). However, these pragmatic explanations, without prior planning or a pre-established route beyond what is happening and the opportunities that arise, also appeared in interviews with psychotherapists of various models. Oddli and McLeod (2017) found that psychotherapists explain how they work in therapy session as a moment-by-moment integration of different sources of knowledge, including *Trying Out* (using ideas and interventions tentatively to verify their usefulness in therapy session) and *Adopting an Improvised Sequential Approach to Treatment* (decision making is improvised, within the session, implicit in the interaction).

When examining percentages, the biggest differences in these justifications would be in line with the rest of the findings related to language: novices highlight justifications like clarify or summarize what the client said, and in experts the most common justifications are *Direct the Conversation* and *Change the Meaning for the Client*. Novices would be using their support and questions to better understand the client, while experts would be more assertive, trying to change more meanings. These latter aspects could be the reflection of uses of language such as that found in Marchena-Giráldez et al. (2013) where expert therapists were more direct–displayed greater authority–when giving instructions regarding what clients had to do outside the session.

Theoretical reasons (the third category *Theories and First Session Operation*), are the second most used group of justifications for experts and novices alike, although the former present a higher percentage (31.36% versus 28.5%). Experts might be expected to justify their language more based on theories, as they are presumably

more familiar with them, have internalized them and find them more accessible, as suggested by theorists (Anchin & Singer, 2016; Betan & Binder, 2010). However, experts and novices obtained similar results and are influenced by the same biases in cognitive tasks that require theoretical knowledge such as case formulation or diagnosis (Eells et al., 2005; Kim & Ahn, 2002; Witteman et al., 2012). These results can also be observed in our sample, since both experience groups present similar percentages in the *Therapists' Theories and Mind Reading* subcategory to explain their language (4.73% in experts and 4.84% in novices). In the novices sample the *Working the Reason for Therapy Session* subcategory stands out. This would indicate that novices follow the most conservative "protocol" possible in the first session: focus on working on what the client needs and getting to know their issues and requests in general (Rodríguez-Arias & Venero, 2010).

Finally, both groups justified their language based on the therapeutic relationship, with novice therapists (28.49%) being more likely to use this justification than experts (25.44%). In this category, we observed that novices justified their use of language to *Validate the Client* and experts to *Cause Relief in the Therapy Session*,

normalize the situation. The former would use language to make the client feel understood and thereby strengthen the relationship, while experts would do so to give hope and calm the client in therapy session.

Together, these first results on the intention of language would indicate that the main justifications for novices are to validate, clarify, summarize and understand the reason clients seek therapy, while for experts it would be to generate relief, lead the conversation and change meanings.

Data Triangulation

Before triangulating the data, it is important to remember two fundamental aspects of this study's multi-method design.

First, the design of the doctoral thesis was conceived to overcome the individual limitations of each study. Both studies share fundamental aspects, such as the theoretical model of therapists, the moment when the session was analyzed (always the first or second session), the selection and exclusion criteria for participants, the instrument with which the language was analyzed, and the definition of experience. The main idea after triangulation was that

similar results may be obtained even with different designs, which would imply more robust evidence of the studied phenomenon, despite the possible limitations that each study may have individually.

Thanks to this approach, the main difficulty in studying experience in psychotherapy has been overcome: the lack of a shared definition. This does not imply that the definition used here is superior to those reviewed in the introduction. We have rather tried to emphasize that when there is a consensus in the definition, results are easily comparable. Arriving at a definition of experience that is useful for research in psychotherapy can be, as stressed by certain authors, a *Herculean* task (Norcross & Karpiak, 2017) which, of course, is not the object of this essay.

Along with these characteristics, the most important aspect of the design shared by these studies is to maintain the client as a constant in the interaction with therapists. This characteristic resembles what ultimately defines clinical trials: treatment is the independent variable, but it is the same for all participants, it is constant (hence the importance of manualized treatments in psychotherapy). In this case, in addition to the treatment (all therapists are systemic), the client is constant for all therapists and that

allows us to study the variables of interest (language and experience).

Thanks to this procedure, we hoped to be able to control central aspects of the therapist-client interaction. We thus eliminate possible alternative explanations of the language analysis related to explanatory factors specific to the client, such as their distinctive way of explaining themselves or the difficulty of a particular case. Data interpretation can therefore focus on the therapist's language and the interaction with the client.

The main combined results of the studies are summarized and commented below:

1. When the results of studies 2 and 3 intersect, data is consistent, indicating that novice and expert therapists differ in the Conversational Act dimension of the SICOLENTE instrument: **experts** are characterized by introducing **more new information** into the dialogue, through comments or questions, and **novices** work using more **explorations** and **support** during the conversation.

Thus, in Study 2, although the expert therapist had less contact time with clients, he introduced more information (reframes, metaphors, therapeutic presuppositions) than novices. We found the same results in Study 3, where experts chose the option of introducing new information more frequently and their shared information/new information ratios were lower than in novices; this means that they introduce more changes of meanings than the latter.

One of the advantages of the SICOLENTE instrument is that it allows us to investigate this ratio: which part of the client's information is validated to make the client feel supported and which part should be modified to elicit change. This ratio is probably a central aspect of the common factors reviewed in the introduction to this dissertation. All therapists of any model seek a balance between them. What we have verified with the two studies conducted is that it is a differentiating aspect between expert and novice systemic psychotherapists. The three classic authors of the first study show great differences in how they use support for clients and how they introduce changes, even though all three work with the same client. This index (shared information/new information) is

useful in differentiating Rogers' model, more committed to validation, from the approach of Ellis or Perls, that make a clear commitment to obtaining changes within the session. Similarly, it serves to differentiate the style of the two modern therapists of the first study (the brief systemic and the cognitive-behavioral), showing that–although the two display similar support rates–the systemic therapist made more change interventions, as corresponds to a brief therapy model.

2. Studies 2 and 3 are also consistent in showing how expert and novice therapists differ in **client support**. Novices use more interventions to create therapeutic relationships and, in addition, the type of validations they perform are qualitatively different. **Novice supports** are **longer**, including more information such as behaviors, emotions or thoughts that they perceive in the client; this is known as *Strong supports*. Meanwhile, **experts** seek to validate with **shorter** interventions, more in the line of backchannels (yeah, right, uh-hum, okay); these are called *Weak support*.

This can be understood again as part of a strategy focusing more on creating a therapeutic relationship,

which seems characteristic of novices. This is perhaps related to the training they have received and have a hard time giving up in their first sessions. Experts, guided by a strategy that focuses more on change, not only diminish support, but those who do use language to support the client do so more concisely and with the objective of maintaining the conversation. This does not mean that experts stop making empathic comments or worrying about the therapeutic relationship; it could be that the lower frequency of *Strong supports* merely indicates that experts know how to differentiate when it is crucial to validate certain aspects, and which others can be omitted.

3. Finally, another aspect that can also be triangulated (although not as directly as those just discussed) refers to the **interaction**. Both the expert of Study 2 and the **experts** in the experimental task seem to show a **greater ability** to **adjust** to clients.

As evidenced by sequential analyses, the expert therapist in Study 2 receives fewer rejections than novices although he introduces many more changes of meanings (while the expert only obtained one *Rejection* code from the client, novices accumulated up to 4 rejections in a single session). Another indication that experts adapt to

the client better than novices was found in the third study, where it was ascertained (contrary to what was hypothesized) that novices do not alter their behavior, whether they are interacting with the client in the normal condition or in the rejection condition. Because they are more capable of adjusting, experts would stop proposing as many changes and new ideas to someone who shows so many disagreements and repeatedly expresses that they are not being understood.

It seems clear that this *shared information/new information* ratio that we have been describing cannot be based solely on an aprioristic strategy of the therapist but must be adjusted to the client's conditions. Undoubtedly, the therapist's model is decisive–let us again remember the differences between the three classic authors and the two modern authors of the first study–but the client's responses to the professional's proposals also condition his or her performance. It is not just about introducing new information, but about making it fit, making it easier for the new to be integrated into what the client already knows. And here, the expert therapists of the two studies seem to act with greater competence. That this greater ability corresponds to a greater efficiency is something

that cannot be asserted with the data collected for this research. Although from a theoretical point of view, we should at least trust it to be so. As Anderson and Hill (2017) point out in their contextual model of skills, a defining aspect of being "expert" in therapy is to maintain a balance between relational skills and technical skills; the ability to manage the relationship with the client and adapt to their needs and style of collaboration, such that, when new ideas or treatment techniques are suggested, they may be accepted and are useful for change.

In summary, expert therapists introduce more information than novices, reducing the number of supports and making them shorter; and, in addition, they seem more skilled when it comes to adjusting their attempts at changing meanings depending on the client's conditions.

What Implications Do these Results Have at Clinical and Didactic Level?

A question that still needs to be answered is whether there is an optimal ratio between shared information and new information. So far, studies indicate that basic language skills are related to better therapeutic outcomes,

better therapeutic alliance and successful follow-ups of up to three years (Anderson et al., 2016, Heinonen, 2014, Schöttke et al., 2017). Probably, the ratio we propose is within those basic capacities that every therapist possesses, either naturally, or after training. Be that as it may, it must always be investigated alongside the interaction with the client and not in isolation from the rest of the interaction (Stiles & Shapiro, 1994). That aspect, which we will call ***linguistic adjustment*** (i.e. what new information is introduced, in what way, how it fits into prior information, when it is suggested, what information is essential to summarize and validate, what can be omitted), is, in summary, (1) the basic unit of psychotherapeutic work and (2) a reflection of the interaction with the client.

As a reflection of a basic linguistic process during dialogue (using what was previously available and introducing new information to advance the conversation), it is understood as a good candidate to investigate the rest of the common and specific aspects of psychotherapy. It is present transversely throughout the treatment, either during the execution of a specific technique, such as psychoanalytic interpretation

(Peräkylä, 2011; Weiste, 2015) or when summarizing or validating the client (Korman et al., 2013).

Second, the ratios are, at least in the case of the experts investigated, the result of the interaction with the client. It will be necessary to verify, in real clinical settings, if the information that is rejected is always a sign of mismatch and if, ultimately, that mismatch is therapeutic or not. For example, within the theories of models such as Gestalt or Rational-Emotional therapy, disagreements can be understood as a sign of the client's problem (figure-ground or cognitive schemes).

However, for the study of psychotherapy in general, and especially for the model of brief systemic therapy that has been studied, being able to introduce changes, which the client does not disagree with, seems more positive than counterproductive. As Muntigl and Horvath (2014) indicate, these discrepancies compromise the therapeutic relationship and with it, the clinical outcomes; these would go to demonstrate that a proper collaboration between therapist and client is not being achieved (Bordin, 1979).

Therefore, the fundamental aspect in training is that novices may become capable of adjusting to clients. About this adjustment, we know that systemic experts have been characterized by short supports and proposed changes, as long as the client demonstrates high rates of agreement. This use of language is simple to teach; novices can be encouraged to introduce more changes and perform shorter validations to emulate the interaction implemented by experts. When referring to teaching skills, procedures such as role playing and modeling may be the most appropriate. Along with the use of language, training should seek to make novices feel effective and skilled, since all three aspects predict good clinical outcomes, especially in brief therapists (Heinonen, 2014, p. 64). In addition, it seems sensible to think that they are related: a greater sense of efficiency and skill in therapy, more attempts to change and introduce meanings and less insecurity about the state of the therapeutic relationship.

The other fundamental aspect, which we have called responsiveness or adjustment, is however more complex to teach. Experts have probably displayed this characteristic in the studies because, as they have automated linguistic aspects to a higher degree (either

through repetition and experience or through deliberate practice as teachers), they have more attentional resources to select which aspects to change and which aspects to support or omit (adjustment). It is therefore considered a cognitive task, which takes place during dialogue. If it is cognitive processing, it could be taught by analogous tasks such as the one in Study 3 or ClientBot (Tanana et al., 2019). Another possibility is to have role-playing games that predetermine which aspects it would be fundamental to change, where to introduce information, which are necessary (and sufficient) for support, and which ones to omit. Thus, modeling and reflection on adjustment could be facilitated in training settings. In addition, thanks to this methodology of "constant clients", different degrees of difficulty could be deliberately practiced, that is, students would know that they are trying to perform the cognitive task of adjusting. Finally, thanks to the *shared information/new information* ratio, detailed feedback could be provided to trainees on how to improve in the different pre-defined cases that they worked on. The hope will always be that these abilities may be generalized to the infinite possible interactions between human beings.

What Implications Do these Results Have at a Linguistic Level?

In the introduction, an explanatory model was proposed in which the therapy involved in psychotherapy was explained through the fundamental aspects of language use and particularly of face-to-face dialogue. People understand each other through dialogue, by actively collaborating in three-step sequences (calibrating) (Bavelas et al., 2017). In psychotherapy, both parties provide information in the dialogue. That is, clients would begin many of these sequences by providing information that therapists do not possess and cannot arrive at in any other way (e.g. about their life, problems or resources among other possibilities); on the other hand, therapists (especially experts) introduce new information in the dialogue. These new ideas and meanings come from theoretical assumptions.

Based on our results, and hypothetically, the analysis of novice-client interactions should reflect that clients begin more triple calibration sequences than therapists and, in expert-client interactions, it should be found that therapists initiate at least the same number of calibration sequences as the client.

From this perspective, the client categories *Follow* and *Reject* would reflect the ease (or difficulty, depending on one's view) of calibrating the information provided by the client. Unlike natural dialogue, in which presuppositions generally go unnoticed, people in psychotherapy adopt an active position toward change (Rodríguez-Morejón, 2016), which would include determining whether the information suggested by therapists (therapeutic presuppositions) fits into the common ground or not, and ultimately, integrate or reject such information until they find new alternative information that they can integrate.

Limitations

In order to carry out the multi-method design, some assumptions had to be accepted that would facilitate the triangulation of data, but these also imply limitations. In summary, the main limitation is that only the following have been analyzed:

- First sessions
- With systemic therapists
- Using the same definition of experience

For example, because we always compared first interviews, it is impossible to generalize results to other moments of the treatment; the same would apply when attempting to generalize to other therapeutic models. Given the definition used for experts, our data cannot clarify if the results obtained are due to the therapist's experience or his/her level of expertise: our definition of expert includes a certain experience (ten years or more of clinical work), as well as being a trainer of other psychotherapists. This latter aspect may imply that some of the favorable conditions for expertise proposed by Tracey et al., (2014) are being created. For example, as teachers they would have constant feedback of their performance (from the students who observe and choose them as trainers) and would carry out deliberate practice (at least with the intention of demonstrating the technique, or intervening with therapists in training).

Along with the above, each study presented its own limitations, which we expect to have overcome thanks to the multi-method design.

In the study that develops the SICOLENTE instrument, several limitations are worthy of note: a) The SICOLENTE instrument only analyzes the verbal aspects

of the psychotherapist-client interaction, which prevents us from determining the effect it has on the dialogue in relation to other communicational elements such as intonation, facial gestures or hand gestures (Bavelas et al,. 2017); b) In this study only individual therapies were coded and it would be advisable to reflect on the necessary modifications to codify sessions with more than one client.

Another aspect of that study that requires improvement is the size of the sample used. Cohen's kappa index is influenced by coding systems in which there is low frequency in one category (the client's category *Reject*, for example; Zhao et al., 2013), which could artificially affect other indices obtained, although inter-coder agreement was very high in categories with lower frequencies. In any case, increasing the sample size could alleviate this problem. Similarly, the possibilities of the instrument are greater if we work with a combination of two or three dimensions, which would cause some of the code combinations to have even lower frequencies, which again leads to the need to work with larger linguistic samples.

With the second study, rather than attempt to make generalizations, we have taken advantage of the specific sample naturally created in a training setting and have integrated it into a multi-method design. Thus, this naturalistic study has implications for the sample and its external validity. We researched one psychotherapy model with just one expert. In addition, the small sample size detracts from the solidity of our conclusions and interpretations.

Another limitation shared with the rest of the studies is that the sequential log-linear analysis used in the research assumes that what is important in dialogue is the relationship between the consecutive turns. In other words, we cannot easily analyze the context or track the accumulative effect of previous turns.

Finally, the limitations of the third study are related to the behavior of the experimental task. This means that the conversation cannot be smooth with the client for several reasons. First, interaction is generated by what participants choose and not by what they say freely. This would have had greater ecological validity if the client's recordings were an answer to what the participants said freely. However, this would imply a technological development that was not attainable in this study. Second, by having to justify the reasons behind each intervention, this generates interference in the conversation.

Another limitation is that the task presents only two conditions, with the same problem and client. Conditions were designed to reproduce a normal interaction, and an interaction in which the client needs to clarify things very often to the therapist, changes topics and shows disagreement with all the interventions, in a way similar to the complex interactions raised in the FIS by Anderson and Patterson (2013). Theoretically, the client's responses should act as an intermittent reinforcement in the *normal condition* for the therapists' new information and generate a situation of helplessness in therapists in the *rejection condition*. However, having greater variability of conditions, clients and problems could help in the generalization of the data obtained.

Finally, by working out the justifications of therapists through the Grounded Theory, we could not obtain an exhaustive and mutually exclusive system of categories representing all psychotherapeutic models, preventing quantitative analyses. This would involve extending the sample size to include professionals with different theoretical models and refining the system of categories with new findings.

Future Research

Considering the limitations and potentialities of the studies, future research is presented that would serve to develop and advance the field of study.

Regarding the SICOLENTE instrument, this was the first attempt to assess the reliability and validity of this instrument and should therefore serve to help its improvement. On the basis of this preliminary data, it will be necessary to review the following:

1. Categories related to validating (S) or introducing new meanings (N, I). While these have been particularly relevant when it comes to understanding the therapeutic language, it would be convenient to think of subtypes for each of these categories that would allow us to make richer descriptions of a central process in psychotherapy, that is, the balance between validations and the creation of new meanings.

2. The high percentages in the *Neutral* (N), *Unspecific* (U) or *Mixed* (X) categories could be indicative of the need for greater refinement of the instrument. The neutral or nonspecific codes are attributed to rather ambiguous messages that do not fit into another

category, which is information that is lost. In contrast, for the *Mixed* (X) categories, the case is quite the opposite; there is a great deal of information, but of at least two different codes, which could be better exploited if subtypes were created in the category, both in Therapeutic Topic and in Content.

3. Regarding the validity of the instrument, it is necessary to continue investigating this aspect by conducting studies on criterion validity. An alternative for the future would be to compare the SICOLENTE with other similar instruments.

For studies 2 and 3, research should be replicated using more theoretical models and larger samples of experts and novices.

Specifically, in natural contexts, research would benefit from including variables like outcome, therapeutic relationship or other constructs that would enable us to relate linguistic aspects with such variables, as is the case with the personality and language studies presented in the introduction (Boyd & Pennebaker, 2017).

Finally, the experimental task opens the door to the following possibilities:

1. The development of the experimental task may involve new actors and problems to increase their capacity for generalization or to follow the same case in different sessions, and to investigate how language changes over the course of treatment.

2. Another possible variable of interest that could be included is reaction time, thus investigating not only the content of thought but also the speed at which thought is accessed. This data may facilitate the distinction between experts and novices in other respects: the use of system 1 or system 2 of information processing (Flores et al., 2014; Kahneman, 2011).

3. The codes obtained from the Grounded Theory on language justifications could be further developed. For example, thanks to therapists from other models explaining their motives. This would enable the creation of a system of exhaustive and mutually exclusive categories that would facilitate the quantitative analysis of the language used by any therapist conducting the experimental task.

4. Another fundamental aspect that will benefit from the

development suggested in the previous point will be the study of the concordance between the justifications offered by therapists and their use of language. This would allow us to examine cases of support used to validate and determine what they have in common, or how these differ from support that only sought to introduce a question.

Finally, a more developed and complete version of the SICOLENTE instrument could be created to enable a more microscopical distinction of certain aspects of language that are currently going unnoticed. How therapists justify their use language could offer a new perspective to develop new subcategories.

Chapter 7: Conclusions

Firstly, we can conclude by affirming that the SICOLENTE instrument:

1. Allows to reliably categorize language exchanged between therapists and users.

2. Has proven to be valid for describing and differentiating the language used by therapists in therapy sessions, according to the therapeutic model of their choice. Our unexpected findings can be attributed both to deficiencies in the instrument's sensitivity, which will require correction, and also to the possibility that some of the therapists studied are not entirely faithful to the theory they endorse, perhaps because of the cinematographic context in

which the studied recording was made.

Secondly, the study in a naturalistic setting makes the client a constant, while therapists change. This allows us to study differences in performance between novice and expert therapists. The results are:

1. Novice therapists make a greater effort to take care of the relationship, using more support and exploration maneuvers.

2. The expert therapist introduces more changes of meanings.

3. The expert therapist has a higher proportion of short supports (backchannels) than novices.

4. When novices introduce changes in meaning, they are more likely to be rejected than the expert.

Thirdly, the study designed as an analogous experiment in which, again, the client is a constant. The results obtained are:

1. Expert therapists introduce more new information and novices support and explore more.

2. When it comes to the *Support* code, novice therapists tend to offer a larger number of strong (long) validations, while experts offer shorter validations ("yeah", "right", "got it").

3. Therapists (regardless of their experience and of whether their proposals are rejected or not), increase the amount of new information they introduce as the session progresses.

4. Expert therapists introduce less new information in the *rejection condition*, while novices' behavior is the same in both conditions. Experts adapt more to client responses.

5. The use of language is an intentional choice, since the justifications given by therapists to explain their interventions are consistent with the language used. The most notable reasons by group are, in the case of novices, to validate, clarify, summarize and understand the reason for consultation; in the case of experts, to generate relief, lead the conversation and change meanings.

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Annex 1 : Experimental Task Script and Response options for participants

Next table presents the written script for the actor (lowercase) and the response options for participants (uppercase). The coding column presents the triad of codes with the SICOLENTE instrument. The actor always has two possible responses to the participants (except in introduction C1 and interlude C6). Participants only see one of the two responses when they carry out the experimental task. In the *rejection condition*, the actor only responds with the options marked with **.r**, while in the *normal condition* he can respond with **.f** (follow) or **.r** (reject) depending on answers given by participants and the internal probabilities of the task.

Interlocutor	Speech	Codification
Introduction C.1	Well... I've been bad for a while, feeling terrible and thinking that this has to end now... I'm sad for no reason, crying all day and without energy to do anything, lying down all day	FPX
T1	1. YOU'RE SAD WITHOUT REASON, CRYING ALL DAY, ALRIGHT	SPE
T1	2. AND ASKING YOURSELF CONSTANTLY WHAT IS HAPPENING TO YOU, DON'T YOU?	NPT
C2.f	Yes, while lying down I start thinking a lot about what to do or not to do, without work without a partner ... but I have no strength and that makes me cry more.	FPX
C2.r	Not... really... I know why I am like that. I have lost my job and at my age I'm still alone, that makes me cry more.	RPX
T2	1. SO, WHEN YOU THINK ON YOUR CURRENT SITUATION YOU GET SADDER. HOW LONG HAVE YOU BEEN LIKE THAT, WITHOUT ENERGY AND SAD?	SPX/EPX
T2	2. YOU'RE VERY SAD AND YOU'RE ALSO NOTICING IT AFFECTS HOW YOU THINK OF YOURSELF.	NPX
C3.f	I've been noticing that too much, I really cannot (cries) I don't know what's wrong with me or anything ... I'm not like this.	FPT
C3.r	It is not something new, not now, I have always been quite pessimistic but I really cannot (cries) I am not like that	RPT
T3	1. TAKE YOUR TIME ... YOU HAVE ALREADY TOLD ME THAT YOU ARE GOING THROUGH A DIFFICULT MOMENT... IF THIS IS NOT HOW YOU REALLY ARE, HOY ARE YOU REALLY?	SPU/ENU
T3	2. I DON'T KNOW IF WHAT YOU MEAN IS THAT YOU ARE TIRED OF BEING LIKE THIS AND YOU WANT TO BE LIKE YOU USED TO BE.	NGX
C4.f	I could be someone maybe a little pessimistic, but I played sports, studied and entertained myself, now I don't know what happened ... it's like I've lost something, and I don't know what it is.	FXX
C4.r	Well... actually, I was also pessimistic before, but I did things. What I want is to be well, to get my life back, because it's like I've lost something and I don't know what.	RXX

Interlocutor	Speech	Codification
T4	1. I UNDERSTAND. BEFORE YOU COULD BE PESSIMISTIC TOO, BUT NOW YOU FEEL THAT YOU'VE LOST SOMETHING, RIGHT?	SPT
T4	2. I UNDERSTAND. I GET THE FEELING THAT WHAT YOU'VE LOST IS THE REAL ALEJANDRO AND YOU DON'T LIKE THIS NEW VERSION.	NPE
C5.f	That's it, I feel lost I'm ... I'm a mess ... also worrying my parents a lot and I don't like that at all. I think these months have been the ones that have broken the camel's back and that's why I'm like this ... (cries)	FPX
C5.r	I'm not entirely sure about that either ... I'm a mess ... I may have lost something, or I've lost myself, what I know is that I'm worrying my parents a lot and these months have been the ones which have broken the camel's back and that's why I'm like this (cries)	RPX
Interlude (fixed therapist option)	I understand the situation: you have been having a hard time, without strength and made a mess ... so bad that even your parents are worrying about you. After all that you're telling me, how can I help you?	SPX/EGU
Interlude C6	I want to be happy, not be as depressed as I am now. Recover my energy and my strength. I wasn't really the life of the party before but... I had dreams, interests you know... I want to be happy again and have that.	FGE
T5	1. SURE: YOU WERE NOT THE LIFE OF THE PARTY BUT YOU WEREN'T DEPRESSED LIKE NOW EITHER... OK. WHAT YOU WANT ME TO DO IS TO HELP YOU BE HAPPY AGAIN	SXE
T5	2. I UNDERSTAND THAT THE HAPPIER YOU ARE, THE MORE DREAMS, INTERESTS AND ENERGY YOU HAVE, THE MORE LIKELY IT WILL BE THAT YOU WILL FEEL HAPPIER.	NGE
C7.f	Of course, because when I realize that I am excited or wanting to learn something or do something I already know that I'm happy. So, of course, that's it, yes, yes. What happens is that as I was telling you, I don't know where to start because I there are too many things that make me feel bad right now and I don't feel capable and... (sigh)	FXX
C7.r	Well, not really. I think it is more that I start doing things and closing problems or stories, but I don't feel like I'm capable of anything. What happens is what I was telling you, I don't know where to start because there are many things that make me feel bad right now and... (sigh)	RGX

Interlocutor	Speech	Codification
T6	1. RIGHT. SO YOU SAY YOU HAVE MANY THINGS THAT MAKE YOU FEEL BAD BUT YOU DON'T FEEL LIKE DOING ANYTHING. WHAT THINGS DO YOU MEAN?	SPE/EPU
T6	2. RIGHT. SOMETIMES PEOPLE ARE UNHAPPY BECAUSE THEY HAVE MANY THINGS ON THEIR PLATE, AND MAYBE THEY NEED TO HAVE TO LEAVE SOMETHING BEHIND.	NPE
C8.f	Maybe it's just the way I see things huh ... my parents overwhelm me a lot because they want me to be fine, then my friends don't understand me and I hardly see them because they all have relationship or childrens and I can't find anyone to distract me, my head is going crazy and I feel out of control.	FPX
C8.r	You've not understood me; the things that happen to me are the same as always. It's me who takes them badly. I guess it's normal for my parents to worry, they just don't help me and I feel as if I am out of control, going crazy.	RPX
T7	1. I UNDERSTAND THAT THE CURRENT SITUATION IS VERY HARD FOR YOU, EVEN MORE SO IF YOU SAY THAT YOU FEEL OUT OF CONTROL AND GOING CRAZY	SPE
T7	2. I WOULD LIKE TO KNOW MORE ABOUT THAT LAST THING YOU SAID. WHEN DO YOU FEEL MORE IN CONTROL DURING THE DAY?	IIE
C9.f	Yes, mm now that you mention it, yesterday I was not having those thoughts, but because I was with a friend who came to visit me and managed to get my mind off things. It lasted as long as she was with me, or a little less because I felt like I was getting sad and distracted at the end.	FIX
C9.r	Yes, but I don't think it's a topic to discuss here because yesterday, for example it was different because of a friend's visit, nothing that I can really control. I also felt like I was sad and distracted at the end.	RIX