Psicothema

Sequential analysis of an interactive peer support group

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Abstract

Background: A therapeutic matrix for women who had survived breast cancer was designed by combining the principle of interactive peer support with the exploratory approach of group therapy. **Method:** An observation instrument was designed and applied to the recorded therapeutic sessions, thereby enabling the multidimensional coding of the interactive support process. Lag sequential analysis was then applied to the data. **Results:** The analysis revealed patterns of interactive peer support which were conditioned by the therapist's communicative behaviour and by other derived behaviours. The significant associations correspond to strategies that serve to facilitate the therapeutic factors. **Conclusions:** The therapist's behaviour is the fundamental axis around which the corrective process unfolds, and it is this process that facilitates the mobilization of therapeutic factors. The levels of interactive support shown by the group members acquire greater discursive complexity and interpersonal sensitivity as the group sessions progress.

Keywords: breast cancer, group therapy, interaction analysis, field formats, help patterns.

Resumen

Análisis secuencial de la ayuda interactiva en grupo terapéutico. **Antecedentes:** se diseña una matriz terapéutica para mujeres que han superado el cáncer de mama combinando el principio de la ayuda interactiva entre iguales con la orientación exploratoria de los grupos terapéuticos. **Método:** se construye un instrumento de observación de las sesiones terapéuticas registradas que ha permitido la codificación multidimensional del proceso de ayuda interactiva. El análisis se ha llevado a cabo aplicando la técnica de análisis secuencial de retardos (lag). **Resultados:** se han hallado patrones de ayuda interactiva tomando como referente la conducta comunicativa del terapeuta y otros comportamientos derivados. Las asociaciones significativas tienen sentido como estrategias facilitadoras de los factores terapéuticos. **Conclusiones:** la conducta del terapeuta es el eje fundamental para el seguimiento del proceso correctivo que facilita la gestión de los factores terapéuticos. Los niveles de ayuda interactiva ganan en complejidad discursiva y en sensibilidad interpersonal a medida que las participantes realizan las sesiones previamente programadas.

Palabras clave: cáncer de mama, terapia de grupo, análisis de la interacción, formatos de campo, patrones de ayuda.

Although cancer continues to be one of the major causes of death, advances in preventing and treating the disease are changing the range of needs that need to be considered when making decisions from a psychotherapeutic perspective. This is the case of women who have survived breast cancer (Baselga, 2008).

Following the indications of Yalom and Greaves (1977) and Benioff and Vinogradov (1996) regarding use of the group therapy approach with cancer patients, it is assumed that when the treatment stage ends with the news that the cancer has been beaten, therapeutic factors should be mobilized by combining the model of supportive groups with an exploratory attitude. Within this framework, the present study examines a therapeutic matrix in the form of a group that is analytic, formative and supportive. In order to respect the original Spanish name this approach will be hereinafter referred to using the acronym GAFA. In GAFA the importance of affective experiences and the need to untangle emotional 'knots' (exploratory aspect) is complemented by both the formative element — whose

purpose is to help group members become aware of their own strengths and to build a vision of the future — and the social support that derives from listening to one another (Cyrulnik, 2003; Roustan, 2008; Schmid, 2007; Yalom, 2000).

Interactive support, which implies the 'giving and receiving' of cognitive and emotional support by group members from their different participatory positions, generates a corrective dynamic, in the sense described by Kaplan and Sadock (1996), and it is on this dynamic that any sequential analysis (Sackett, 1980) of observed group sessions must be focused. Within this context, the therapist structures the group's activities and actively intervenes to resolve the methodological problems that arise in relation to the analytic exploration, the formation of the group or the provision of social support.

In a group involving women who have survived breast cancer, the task of participants is to listen and talk about suffering, worries, hopes and the desire to live a normal life again now that treatment has been successful. Complementarily, the task of the therapist is to follow this pattern of listening and talking and act as a facilitator of the therapeutic factors. The women become 'involved' by exchanging personal experiences, raising points for discussion, and sharing positive and negative reactions, while the therapist signals this 'involvement' on the basis of what is said and the ways in which group members interact. Given that the women participate

spontaneously within this framework, the channelling of their behaviour depends upon the actions of the therapist, whose way of mobilizing the therapeutic factors will, in turn, be influenced by the group members. As the scheduled sessions progress, the communicative link between participants and therapist forms an ongoing feedback loop that develops in relation to both the present situation and to the accumulated experience—or life—of the group.

As a communicative phenomenon, interactive support behaviour can be observed as a form of multimodal interaction, one that is governed by the rules of oral communication, in this case, under the specific conditions of the therapeutic conversation in the observed group (Roustan, 2010). Specifically, the therapeutic task gives rise to different participatory structures through the ongoing combination of the use of words with listening behaviour (Hayashi, 1991).

In light of the above, the aim of the present study was to identify sequential patterns of interactive behaviour through observation of a peer support group, taking the therapist's interventions as the criterion behaviour and the contributions of group members as the conditional behaviours.

Method

Observational design

From within the framework of observational methodology (Anguera, 2010), it was decided to combine two designs (Anguera, Blanco-Villaseñor, & Losada, 2001) that would enable us to obtain qualitative data that could be analysed quantitatively (Hirokawa, 1988). These designs were:

- Follow-up/Idiographic/Multidimensional
- Follow-up/Nomothetic/Multidimensional

Participants

The observed psychotherapy group (GAFA) was comprised of seven women who had survived breast cancer and a therapist with experience of applying the group analytic approach to cancer patients. The psychosocial profile of the women was as follows: in employment and with qualifications, mean age of 58 years, emotional block and/or breakdown prior to the cancer, and no longer under the effects of treatment.

Table 1 summarizes the main illness-related characteristics of the women. The fictitious names are taken from Greek mythology so as to lend a certain symbolism to the subjective struggle undergone by each of the participants.

Instruments

A total of nine group therapy sessions were recorded in their entirety using two HD video cameras, a surround microphone system (with 360º coverage) and an MP3 voice recorder. Images were processed by means of the *Picture Motion Browser* software, while the Excel program was used to organize the data and prepare it for subsequent transformation into SDIS format (Bakeman & Quera, 1996).

In addition to transcribing the oral aspect of the group therapeutic activity, we also recorded emotional expression in the form of paraverbal and kinesic behaviour (Izquierdo, 2010; Izquierdo & Anguera, 2000, 2001). Criteria for breaking down this information were established in order to give rise to units of observation (Anguera & Izquierdo, 2006).

The observation instrument used was based on field formats (Gorospe, Hernández Mendo, Anguera, & Martínez de Santos, 2005; Pérez-Tejera, Valera, & Anguera, 2011), and a system of exhaustive and mutually exclusive categories was defined for each criterion dimension. In brief, having chosen the core criteria, we then drew up lists of corresponding behaviours and situations until a set of exhaustive and mutually exclusive categories had been obtained, thereby combining the deductive and inductive approaches. As a result, the instrument offers an optimum degree of flexibility.

The field format (Table 2) included four criterion dimensions and 48 codes. The final step in the process of constructing and refining the observation instrument entailed ordering the codes assigned to each criterion dimension in the category system.

Procedure

The seven women were accepted for the group following an individual interview in which a set of pre-established inclusion criteria were considered. A total of nine, 90-minute sessions were scheduled, distributed across a three-month period. All sessions were held in the meeting room of the therapist's office.

As regards the information required to participate in the group, the therapist began the first session by taking the group

Table 1
Age and illness-related profile of the seven group members

Participants	Age (years)	Survival time (years)	Genetic test	Degree of severity
Charis	57	3	Negative	Severe
Maia	62	17	Not performed	Moderate
Maria	71	9	Negative	Severe
Olga	59	1	Negative	Mild
Ula	56	2.5	Negative	Severe
Nora	52	2	Negative	Severe
Irene	52	10	Negative	Moderate

Table 2
First-order criteria and codes that were established for the field format used to observe the therapeutic group (GAFA)

How does the participatory space in which cognitive and emotional support is given and received develop?		How does the group therapeutic activity (GAFA) develop?	
Dimension 1	Dimension 2	Dimension 3	Dimension 4
Criterion: who speaks, when and how much	Criterion: speaking among the participants	Criterion: Activity in the group due to the contribution of participants	Criterion: Corrective intervention by the therapist
8 codes	4 codes	10 codes	26 codes
	1 system of 4 categories	2 systems of 5 categories	5 category systems including 26 codes

photo, establishing the rules and ethical standards of the group, and explaining how the group would work. She also gave the participants a notebook that would serve as a guide to the scheduled sessions, which took into account the course of events related to breast cancer.

The unit for transcribing the sessions was the speaker, which served to identify the relationship of interactive support (i.e., from whom to who). Speech was coded per second in the sequence of turn-taking, taking into account the conversational habits and dynamic conditions of the group activity.

In order to obtain a more condensed account of the characteristics of interactive support in the succession of turns observed during the therapeutic process, a second-order coding was performed by grouping the data from the basic categories into macro-categories, taking as the criterion in each case a more global and distinctive attribute. This enabled two or more basic categories to be considered under one new code (Table 3).

Data analysis

The first step was to check the consistency of the first-order coding by the group therapist. Application of Cohen's kappa index

(Cohen, 1960) yielded an intra-observer reliability coefficient of 1.00.

The data were then coded by a further two observers. The global value of Cohen's kappa for inter-observer agreement was >.90. With respect to the category systems, the following concordance values were obtained between the three independent observers/coders: identification of the speaker = 1.00; speaking in turn = 0.87; intervention by participants: relationship = 0.98; intervention by participants: task = 0.99; intervention by the therapist = 1.00; desirability (or form of exchange) = 0.99.

The data were then subjected to a lag sequential analysis (Sackett, 1980; Gimeno, Anguera, Berzosa, & Ramírez, 2006; Garzón, Lapresa, Anguera, & Arana, 2011). The criterion behaviour was the therapist's interventions, both indirect (visible but not audible) and direct (visible and audible): the therapist's behaviour is the fundamental axis around which the corrective process unfolds, and it is this process that facilitates the mobilization of therapeutic factors.

As regards the statistical analysis, we calculated the conditional probabilities between the criterion behaviour, that is, the indirect (IN: codes 31 and 32) and direct (ID: 40, 50, 60) interventions of the therapist, and the repertory of categories corresponding to the seven women and which describe behaviours associated with *group relationship* (function of maintaining contact, defined in terms of attentional feedback or following behaviour, with or without emotional support: codes 11, 12, 13 and 14) and *group task* (discursive function, defined as the presence or absence of a personal issue and the kind of exchanges that take place: codes 20, 21, 22, 23 and 24). The names of the codes are shown in Table 3.

Finally, we selected those patterns that were significant ($p<.05$) during and up to a maximum of five prospective lags. This analysis was conducted using the SDIS-GSEQ software (Bakeman & Quera, 1996), with event and timed-event sequential data.

Results

Table 4 shows the patterns of interactive peer support that were selected (according to their therapeutic significance) and for which the adjusted residuals were >1.96. The data are presented with respect to the life of the group, that is, according to the accumulated

Table 3
Second-order category system used in the sequential analysis

Question	Dimension	Macro-category/code	Basic categories
How does develop the participatory space?	Type of participant	Women (PP)	P1, P2, P3, P4, P5, P6, P7
		Therapist (PT)	Px
	Interactive structure	Unified (SS)	Single speaker in position (S) or position (L)
		Shared (MS)	Simultaneous speech (Ss) Multiple speech (Ms)
How does the group therapeutic activity develop?	Function of maintaining contact (feedback)	Following behaviour (CF)	Visual following (11) Oral following (13)
		Emotional support (CS)	Visual following with emotional expression (12) Oral following with emotional expression (14)
	Discursive function	Limited (DL)	No personal issue (20) Personal issue: telling (21) Personal issue: responding (22)
		Available (DA)	Personal issue: confirming (23) Personal issue: confronting (24)
	Therapist's intervention	Indirect (IN)	Zero (30) Visible following behaviour: not audible, without emotional expression (31) Visible following behaviour: audible with emotional expression (32)
		Direct (ID)	Analytic (40-43) Educational (50-53) Guiding (60-63) Mixed (70...)

Table 4
Significant sequential patterns of interactive support with respect to the life of the group (< or > 21600 s). The underlined codes are inhibited by the criterion behaviour

Life of group < 21600 s	Life of group > 21600 s
[1] IN31 → 13(L1)-14(L2)-13(L3) / 14(L1)-14(L2)-14(L3)	Patterns [1], [2] and [3] are maintained
[2] IN32 → 14(L1)-14(L2)	[6] IN32 → 13(L1 to L5)
[3] IN31 → 20(L1) / 24(L1)	[7] ID41 ID50 ID60 → 13(L1 to L5)
[4] IN32 → 21(L1)-21(L2)-21(L3)	[8] IN31 → 24(L1-L5) / 22(L1-L5)
[5] ID60 → 21(L1)-20(L2)	[9] ID53 → 24(L1 to L5)

duration of sessions (prior to or after 21600 s, which corresponds to half the total time of all the recorded sessions). The codes shown represent the consecutive behaviours of the group members that are significantly associated with the prior behaviour of the therapist. It is also indicated whether the observed association is excitatory (+) or inhibitory (-), whether the association appears almost immediately (in lag 1) or somewhat later (up to lag 5), and whether the sequential pattern is maintained across two or more of the lags considered.

Patterns obtained when the life of the group was <21600 s

The therapist's behaviour consisting of listening attentively, in silence and without transmitting a dominant emotional tone, perhaps giving a sense of calmness, increases the likelihood that the group members will listen to one another without any notable externalization of emotional reactions [Pattern 1].

When the visible and audible 'following behaviour' of the therapist as listener includes empathic reflection or emotional expression, this may be followed by emotional support behaviours among participants, who listen and react to the contribution of a group member [Pattern 2].

These two patterns [1 and 2] suggest that attention and following behaviour on the part of the therapist, with or without emotional support, is a good communicative strategy for indirectly regulating the emotional support that the group members give or receive, and for achieving a balance between reflection and the sharing of experience in the process of speaking and listening.

As regards stimulation of the discursive function, untangling emotional knots that make it difficult to adapt to a new life, the visual following behaviour of the therapist without expression of a dominant emotional tone does not influence the way in which personal issues are addressed and discussed [Pattern 3].

By contrast, interventions involving attention and following behaviour combined with dominant emotional expression do, after a short delay, influence the taking of a subsequent turn in which an attempt is made to initiate, continue with or bring to a close a personal account [Pattern 4].

Direct intervention by the therapist, facilitating exploratory exchanges (opening up the field of information), has a positive influence on the interplay of exchanges based on talking, asking and responding about one's own life [Pattern 5].

Patterns obtained when the life of the group was >21600 s

The analysis of data from the second half of the group's life indicated that the accumulation of experience did not lead to a change in patterns [1] and [2] of interactive support that were observed during the first set of sessions. However, a new pattern emerged: following behaviour combined with emotional support by the therapist inhibited verbal following behaviour without empathic reflection among the group members [Pattern 6].

As regards direct interventions by the therapist when she is the main speaker, contributions linked to ways of intervening (normalization, emotional sensitivity and altruism) are immediately fed back by group members in the subsequent turn [Pattern 7].

Pattern [3] is maintained in this second set of sessions. However, group members are now more likely to make interventions related to their struggle against cancer and their survival, but without confronting their emotional knots [Pattern 8].

In the final pattern, [9], the therapist intervenes 'actively' to promote corrective confrontation, and the group members respond by reconsidering the meaning of the explicit or implicit stance they have taken with regard to returning to normal life, taking into account what they have experienced and learnt as a result of their illness.

Conclusions

The communicative patterns observed between the therapist and the group members are consistent with a corrective dynamic that reflects the mobilization of therapeutic factors within the framework of the proposed therapeutic matrix (Roustan, 2010).

Through her management of the basic pattern of interactive support, that is, listening and speaking, the therapist is able to foster the process of normalization among group members, enabling them to share personal issues and giving them the opportunity not only to engage in emotional regulation and decentring, but also to show commitment to the group (Lieberman, 1996). The therapist's indirect interventions also create a link that helps build the relationship between group members and the exploratory therapeutic activity (Kaplan & Sadock, 1996). The directness with which group members confronted the emotional knots that appeared in their personal accounts varied across the sessions. On the one hand, this resulted in a more limited discourse at times, although it was nonetheless part of the process of support, learning and self-discovery and should be regarded as a necessary step on the road to confronting one's problems, that is, to the mobilization of therapeutic factors (Yalom, 1985). One aspect that should be highlighted is that the discursive function of 'availability' was more intense (i.e., it occupied more time) during the second half of the group's life when the therapist took an active part in the process of confronting problems and supported the group members' attempts to untangle their emotional knots.

When the therapist's interventions concern the group as a whole, whether in terms of analysis or resonance, the group members close off the private emotional sphere and bring open confrontation of their problems to a halt. The conclusion that can be drawn from this is that the group is resisting the externalization of private material, while continuing to allow itself to be evaluated.

The results also reveal a relationship between the inhibition of problem confrontation by group members and certain therapist behaviours, namely individual and subjective analysis and interventions of an educational nature or which serve to guide the group. Rather than encouraging group members to confront their problems openly, analytic interventions foster a going over of what has just been said, this being a typical reaction after a moment of insight. Interventions that are merely functional (i.e., didactic) are responded to with comments about the present situation that refer to the reality of the group as a whole. While highly necessary in terms of shaping the group atmosphere, social interventions whose purpose is to guide the group do not promote a kind of discussion that is well suited to untangling emotional knots.

By way of a professional and research summary of the analysis conducted, we will formulate nine propositions regarding the observed sequential patterns of interactive peer support. Each proposition may be considered as a hypothesis derived from the core proposal of this research and from the results of the lag sequential analysis, namely, that it is the therapist's behaviour which is the fundamental axis around which the corrective process

unfolds, and it is this process that facilitates the mobilization of therapeutic factors.

[Proposition 1] Silent listening by the therapist, that is, involvement without expression of a dominant emotional tone, excites cognitive feedback behaviour among group members.

[Proposition 2] Listening accompanied by audible and visible movements that transmit empathy or emotions from the therapist excite emotional support behaviour among group members.

[Proposition 3] When the therapist's intervention is limited to following and silent listening, this is unlikely to lead group members to begin speaking about personal issues.

[Proposition 4] From the position of a non-speaking listener, the therapist creates a non-immediate excitatory condition that favours the sharing of personal material when the therapist's intervention involves visible and audible supportive feedback.

[Proposition 5] Right from the initial sessions, direct interventions that facilitate participation encourage the group members to confront their problems (whether in a limited or more available way).

[Proposition 6] As more sessions are completed, there is a lower conditional probability that emotional support (visual or vocal) by the therapist will be followed in the subsequent turn by oral 'following behaviour' without dominant emotional expression.

[Proposition 7] The commitment of group members, reflected in their acknowledgement of the therapist's direct intervention, is maintained as the life of the group progresses.

[Proposition 8] As the number of remaining sessions decreases, the group members take advantage of the therapist's silent following behaviour in order to continue speaking about their lives.

[Proposition 9] In the later sessions, the therapist's direct interventions aimed at problem confrontation mobilize more corrective contributions in the group members when situational trust has been developed in the earlier sessions.

Finally, it should be noted that the above mentioned sequential patterns led to greater efforts being made to focus the task on untangling emotional knots and making proposals for the future. Indeed, as the sessions progress, the exploratory nature of the exchange is consolidated if the group engages actively with the process of sharing and confronting personal issues.

Given that the therapeutic approach used (i.e., an analytic, formative and supportive group: GAFA) does not seek to offer skills training or communication exercises, these interventions serve to create a setting that can enable each individual's subjectivity to be transformed into words. Indeed, this research shows that, in terms of both form and content, the degree of communicative interdependency becomes more complex as the group progresses, and there is a clear increase in interpersonal sensitivity.

As a general rule, the observed patterns show group members to be actively engaged in an attempt to connect to one another within the group, and in doing so, they must struggle with a system of signs whose symbolic structure is highly complex. It is here that they each rely on the interventions of the therapist to help them find their respective ways through the labyrinth of words.

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