Spouses of people with aphasia have reported that developing an effective mode of communication with their partner is one of their most important needs ((McGurk, Kneebone, & Pit ten Café, 2011; Michallet, Le Dorze & Tétrault, 2001). There is a growing interest in a intervention focused on communication between the person with aphasia and his/her main conversation partner (e.g.,Turner & Witworth, 2006; Beeke, Maxim & Wilkinson, 2007).

In studies that aim to verify the efficacy of conversational intervention, few measures have been taken during the intervention to measure the evolution. As a result, they are conducted with less experimental control than it is desirable. These studies provide valuable information on the evolution of conversations, but quantitative research is needed to study more couples and conversations. The present pilot project was developed to verify the efficacy of a conversational intervention with a dyad of a man with aphasia and his spouse, using the powerful Studiocode program for quantitative analysis.

Method

Design and participants

One French-speaking couple was recruited. The members of the couple were a 70-year-old man with moderate to severe Wernicke aphasia, 10 months post-stroke, and his spouse. This dyad wanted to improve their communication and decided to participate in the study. An ABA design was used in this study with measures before intervention and 3 months post-intervention.

Intervention

The intervention is inspired by Supporting Partners of People with Aphasia in Relationships & Conversation (SPPARC) (Lock et al.; 2001). This program suggests different activities (video excerpts of conversations, written information, role-playing games, and written exercises) to make partners aware of their conversational patterns, as well as to recommend possible strategies for change. The intervention took place over one-hour meetings, once a week for a total of 8 sessions. Two objectives were targeted for the spouse: to diminish the use of closed-ended questions and give more time (more long pauses) in conversation to the person with aphasia. The first objective (closed-ended questions) was introduced from the first therapy session (session 4). The second one was introduced during the third therapy session (session 6). At each meeting, the intervention consisted of 1) *observation and discussion phase* of problematic conversation sequences and those that are more satisfying, in which participants were invited to view recordings of their conversation and to express their feelings and interpretation of these excerpts; 2) *suggestion of changes phase*, in which participants and the speech-language therapist targeted behaviours to reduce or promote according to the situation.

Data collection

Conversational situations were recorded on videos. Conversation samples of the dyad were used both in pre-treatment, three months post-treatment, as well as in the treatment's efficacy measures during the intervention. About 5 minutes of conversations on the suggested following topic were analysed: what happened during your previous weekend, and what are your plans for the next one? Also, two videos per intervention where the couple had to discuss and propose a common solution to a problem (i.e. problem-solving task) were analysed.

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Measures

Baseline measures of 2 dependent variables were performed during three baseline sessions and 2 sessions, 3 months after the end of the treatment. The variables are: the number of closed-ended questions/sec and the ratio of the duration of pauses on the total length of the conversations. In order to capture the participation of the person with aphasia in conversation, the ratio of communicated time of the person with aphasia on the communicated time of the spouse was measured and compiled as a generalization measure.

Data analysis

The videos were analysed with the professional program called Studio-code 10.5. This program allows us to analyse videos online and very precisely. Each video is linked to a timeline where the different behaviors are listed to the left. While the video is playing, the coder has only to press a predetermined letter on the keyboard to mark the incidence of a behavior – for example a close-ended question. No transcription is required. After the creation of good definitions of behaviors to observe, this program allowed us to analyse quite rapidly 39 videos from 3 to 8 minutes each. Continuous measures along the therapy sessions and observation of a great amount of behaviors were facilitated by the use of this program by reducing the time needed for the analyse.

Results

The results for questions are presented in Figure 1. Only results from the weekend situations are presented because no occurrence of closed-ended questions was found in the problem-solving task. Results show that the closed-ended questions constantly diminished during the course of the sessions, except for the ninth therapy, where they increased to the baseline level, to diminish again and be maintained low for the two last therapy sessions. At the first 3 months post-therapy session (session 12), this behavior increased again to the baseline level,. However, the behavior's low level is visible at the second post 3-month session (session 13).

Figure 2 presents the results for the pauses. At the third session of therapy (session 6), the objective for the spouse to include more pauses in the conversation has been introduced. This behavior increased continuously from the seventh session to the end of the therapy (session 11). This high level was however not maintained at the post 3-month sessions (session 12-13) but is still at a higher level than the baseline.

The results obtained on the participation are presented in Figure 3. It is possible that a better participation was not obtained because an intervention on non-verbal communication (like gestures and drawings) has not been directly offered. Perhaps different types of behaviours were occurring during the communicated time. For example, it is possible that at the beginning of the intervention process, the man with aphasia was more often in a trouble situation, looking for his words or a way to express his ideas, which added to his communicated time and pushed the ratio up. Deeper analyses of this aspect are required.

Conclusion

This intervention seems to have changed some conversational behaviours in the communication of this couple. Observations of their own conversations on video, followed by discussions with the speech and language pathologist seem to have been enough for the wife to change her questions and increase the length of pauses in conversation.

Further analysis (e.g., on behaviors of the person with aphasia, of reliability and qualitative) are necessary to document more precisely the efficacy of the intervention and other dyads have to be studied. Nevertheless, the number of quantitative measures obtained along the intervention are an important step toward helping determining conversational therapy's efficacy.

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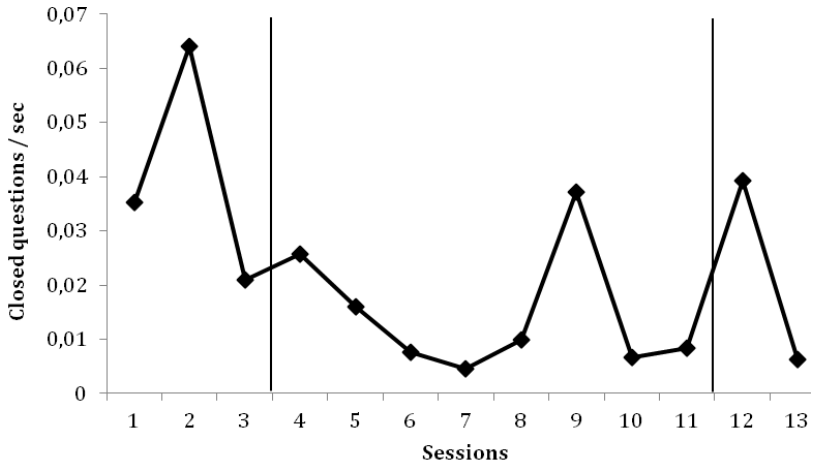

Figure 1. Closed- ended questions by spouse

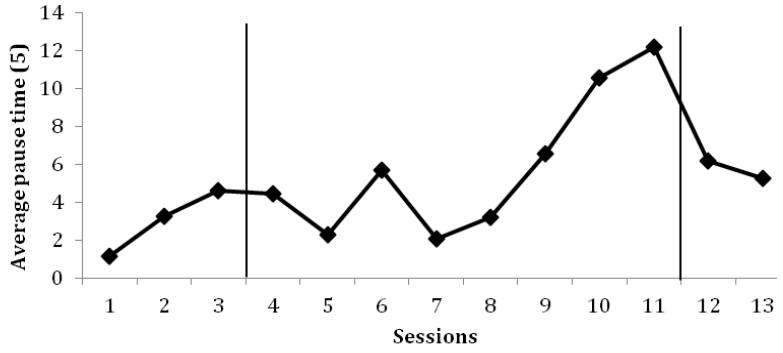

Figure 2. Ratio of the duration of pauses on the total duration of conversation

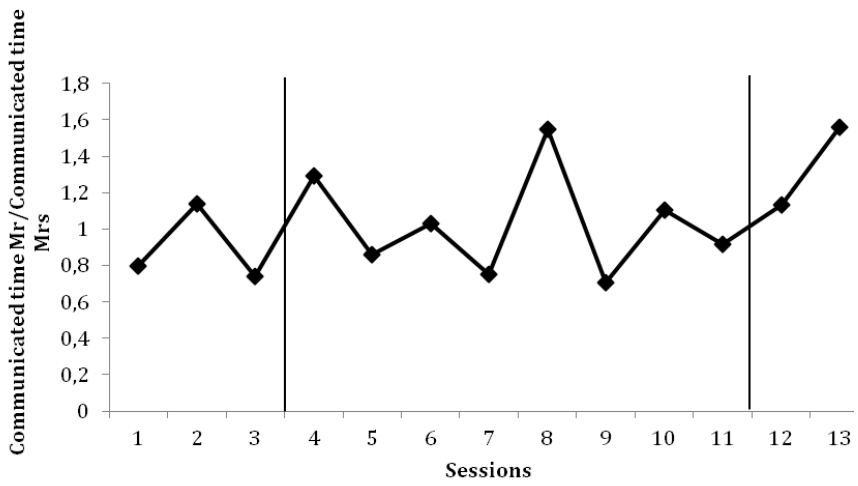

Figure 3. Ratio of communicated time of person with aphasia and spouse