



# Self-Awareness Therapy (SAT) for Schizophrenic Patients

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## Introduction

- Schizophrenia is characterized by a disturbed sense of self and/or poor personal identity (Blankenburg, 1991; Danion et al., 2001; Nienzanski, 2004).
- These deficits would be related to (1) a disturbed capacity to access to information in autobiographical memory (AM) (Conway et al., 2004; Conway, 2005; Gallagher, 2000; Schechtman, 1996) particularly, episodic autobiographical memory (EAM) and (2) deficits in auto-noetic awareness.
- The auto-noetic awareness refers to the notion of "self" and its individuality; it makes our unique memories and to be in his personal history. Furthermore, auto-noetic awareness and EAM enables everyone to travel in the time, ie. to return to the past and to make predictions for the future.
- In schizophrenia, auto-noetic awareness, EAM and projection into specific future events are impaired (Danion, 1999; Danion et al., 2005; D'Argembeau et al., 2008; Riutort et al., 2003; Wood et al., 2006)

## Objective

The present study evaluates the effect of Self-Awareness Therapy (SAT), a cognitive and behavioral intervention on AM, the auto-noetic awareness and the capacity to imagine oneself in the future, in schizophrenia patients.

## Method

The SAT proposed different tasks during 2 x 1h30 on 10 weeks to patients :

- a journal where they noted an event that took place the day before;
- an agenda where they noted an event that took place the day after;
- The execution of an individual and group projects;
- Exercises to become better knew ("Who am I?").

To date, 9 patients were participated in any SAT and completed all the tests before and after therapy.

A battery of measurements were used before and after SAT.

1. The TEMPau (Piolino, 2000) measure the autobiographical memory and auto-noetic awareness on four life periods ( age 0-9, 10-19, 20-30, after 30 years and past 12 months) across three different themes (a meeting or an event linked to a person, a trip, and a family event). Participants were required to retrieve specific personal events corresponding to the period and theme. After each specific recall, the participants were asked to indicate their level awareness (Remember, Know or Guess). A cuing recall task carried out 14 more or less two days later to check whether the participants recalled the same memories.
2. TeMA (Neumann and Philippot, unpublished) measure the projection into the future. Participants were asked to generate specific personal events that could occur to them in the future in response to ten cue words
3. Neuropsychological measures:
  - Digit Span Forwards and Backwards (Wechsler, 1997);
  - Stroop-Color Word Test (Stroop, 1935);
  - Verbal Fluency Task (Benton & Hamsher, 1976).
4. Depression and Anxiety symptoms:
  - Beck Depression Inventory II (Beck, 1996);
  - State and Trait Anxiety Inventory (Spielberger, 1983)

## Results

1. The analyses revealed a significant difference between before and after SAT on the TEMPau scores :
  - Patients reported more specific past memories and less general past memories after than before the SAT ( $t(8)=3.62, p=.006, t(8)=3.41, p=.009$ , respectively)
  - Patients reported more "REMEMBER" responses related to specific memories recall after than before the SAT ( $t(8)=2.78, p=.024$ ).
2. The analysis did not reveal any difference between before and after SAT on TeMA, neuropsychological and affective measures.

Means(SD) of results from different measures

	Before SAT	After SAT
<b>TEMPau</b>		
Specific Memories Recall	0.64 (0.17)	0.75(0.17)
General Memories Recall	.2 (0.12)	.1(0.12)
Auto-noetic Awareness	.44(.23)	.6 (.26)
<b>TeMA</b>		
Specific Future Events Recall	5.55 (2.55)	6.55(2.07)
<b>Neuropsychological &amp; Affective Measures</b>		
Digit Span Forwards	5,6 (0,91)	6 (1,19)
Digit Span Backwards	4,6 (1,4)	4 (1,69)
Verbal Fluency	35,28 (6,16)	37,85 (5,61)
Interference STROOP	126,5 (45,62)	116,33 (30,19)
Depression Symptoms	13,44 (11,27)	8,78 (9,97)
Anxiety Symptoms Y-A	41,33 (13,85)	34,67 (10,37)
Anxiety Symptoms Y-B	40,86 (13,54)	38,42 (10,69)

## Discussion

- These results are in line with previous one (Blairy et al., 2008) and support the notion that, in schizophrenia the retrieving of past specific memories can be improved as well as the associated auto-noetic awareness.
- It is important to note that the level of anxiety and depression symptoms do not increased after SAT despite a mental time travel (recovering past and future specific events) not always pleasant for these patients.

Validation of the therapy is still ongoing. Given these encouraging preliminary results, we are optimistic about the improvement of better self awareness, and therefore a better quality of life in these schizophrenia patients.