

Outcome of the use of the Snoezelen Multisensory Room in an alexithymic patient: a case report

CAROLA DI TARANTO^{1,2}, LEONARDO PROCENESI¹, ANGELA MARIA PATERNITI^{1,2}, ELISA LOPPI¹, ANNA RITA SPERANZA^{1,2}, ALBERTO SIRACUSANO^{1,2}, CINZIA NIOLU^{1,2}

¹Psychiatric Clinic, PTV Foundation- Policlinico Tor Vergata, Rome, Italy; ²Department of Systems Medicine, University of Rome "Tor Vergata", Rome, Italy.

Summary. Alexithymia is a "transdiagnostic" dimensional construct consisting in difficulty in recognizing one's own emotional states and/or sharing them to others. In this case report we illustrate our experience of administration of Snoezelen Multisensory Room (SMR) treatment to a patient, one of our psychiatric inpatient's younger sister who had high levels of alexithymia. SMR treatment consists of visual, auditory, and olfactory controlled stimulations in a specific environment whose application in the psychiatric field is promising. It was administered to Greta twice a week for five weeks. Every session was carried out by a Psychiatric Rehabilitation Therapist and lasted forty-five minutes. The aim of this case report is to illustrate how the individualized, patient-oriented treatment in the SMR led to an improvement not only in the scores of the scales that assess the dimensions of alexithymia (TAS-20 and TSIA) but also in emotional openness that was crucial for the start of a psychological pathway.

Key words. Alexithymia, multisensory room, psychiatric rehabilitation, Snoezelen, unit psychiatric.

Introduction

Self-aware-oriented psychoeducation and meta-cognitive interventions aim at reducing the excessive, dysfunctional rigidity of cognitive processes. The experience acquired by several authors in the field of psychiatric rehabilitation and early literature identify these treatments as best practice in acute contexts¹. Within our psychiatric inpatient ward, in addition to the usual pharmacological, psychological, and rehabilitative treatments, we offer the Snoezelen Multisensory Room (SMR) a sensory, non-verbal, and non-pharmacological treatment. This kind of treatment could improve the access to the contents silenced in a condition of alexithymia and emotional withdrawal due to psychic suffering².

Although in the literature the effectiveness of the SMR is mainly investigated in relation to neurodevelopmental disorders, intellectual disabilities, autism, and dementia³⁻⁷, sensory stimulation has been shown to be able to improve the care of service

L'uso della Snoezelen Multisensory Room in una paziente con alessitimia: un caso clinico.

Riassunto. L'alessitimia è un costrutto dimensionale "transdiagnostico" che consiste nella difficoltà a riconoscere i propri stati emotivi e/o a condividerli con gli altri. In questo case report illustriamo l'esperienza di somministrazione del trattamento Snoezelen Multisensory Room (SMR) a una paziente che presentava alti livelli di alessitimia. Il trattamento SMR consiste in stimolazioni controllate visive, uditive e olfattive in un ambiente specifico la cui applicazione in campo psichiatrico potrebbe essere promettente. La paziente è stata sottoposta a trattamento sensoriale due volte alla settimana per cinque settimane. Ogni sessione, della durata di quarantacinque minuti, è stata effettuata da un tecnico della riabilitazione psichiatrica. Lo scopo di questo case report è quello di illustrare come il trattamento SMR individualizzato e orientato al paziente abbia portato a un miglioramento non solo dei punteggi delle scale che valutano le dimensioni dell'alessitimia (TAS-20 e TSIA) ma anche a un'apertura emotiva che ha determinato l'inizio di un percorso psicologico.

Parole chiave. Alessitimia, riabilitazione psichiatrica, sala multisensoriale, Snoezelen, unità psichiatrica.

users in acute psychiatric settings⁸. In our knowledge, there are no empirical studies that have been published in other fields of care⁹. We tested the SMR in our psychiatric ward and, at a later stage, it was decided to offer the treatment also to the patients' caregivers to relieve internal subjective tensions and create opportunities for emotional sharing with the patient. The aim of this case report is to illustrate how the individualized, need-oriented treatment in the SMR led to an improvement in emotional openness that was crucial for the start of a psychotherapeutic pathway.

Alexithymia and its assessment

The term alexithymia, coined by Nemiah and Sifneos^{10,11}, literally means 'lack of words for emotion' and indicates an affective and cognitive style characterized by the difficulty in identification and verbal expression of emotions with a marked decrease, or absence, of imagination. Subjects with

high levels of alexithymia may be unable to recognize their own emotional states and/or show considerable difficulty in sharing these experiences with others¹². The Toronto Alexithymia Scale 20^{13,14} (TAS-20) is a 20-question self-assessment questionnaire based on a 5-point Likert scale. TAS-20 score can be evaluated as a whole and divided in three subscales associated to the three dimensions of alexithymia: difficulty identifying feelings (DIF), difficulty describing feelings (DDF) and externally oriented thinking (EOT)^{15,16}. The Toronto Structured Interview for Alexithymia^{17,18} (TSIA) is a structured clinical interview. It consists of 24 questions rated on a 3-point Likert scale with six items to assess four dimensions: DIF, DDF, EOT and imaginal processes (IMP). The tool has shown good validity and reliability characteristics in the Italian version¹⁹.

Case illustration

Greta, aged 19, lives with her mother, father, and older sister. The second of two daughters, she is described by her mother as a very apprehensive and caring person for her older sister. Her sister suffers from congenital heart disease, personality and eating disorders for which she has been hospitalized several times since childhood. She has come to our attention during her sister's hospitalization in our ward.

During the Badaracco's multifamily meetings²⁰ held weekly in the ward, Greta showed a marked difficulty in expressing her emotional states. Specifically, she did not take the floor spontaneously nor manage to answer when asked, showing an attitude of evidently painful closure. The only emotional manifestation occurred on a couple of occasions through a silent crying. Therefore, we evaluated the opportunity to deepen Greta's discomfort. Hence, we proposed the administration of a clinical interview and psychodiagnostic instruments; the girl accepted.

First assessment (T₀)

The first assessment (T₀) was carried out after her sister's discharge, during which four multifamily meetings were held. The assessment was performed using Minnesota Multiphasic Personality Inventory-2 (MMPI-2)^{21,22}, Brief Psychiatric Rating Scale (BPRS)²³, Hamilton Anxiety Scale (HAM-A)²⁴, Hamilton Rating Scale for Depression (HAM-D)²⁵ (tables 1-3), TAS-20^{13,14}, TSIA¹⁸ (table 4^{19,26-28}; figure 1).

During the individual interview, the patient appears poorly inclined to dialogue because it is "difficult to talk" and "there is nothing to tell". Greta avoids eye contact, and her head is often low showing clear

Table 1. Assessment at T₀ and T₁: BPRS.

BPRS		
Item	T ₀	T ₁
1: Somatic concern	1	1
2: Anxiety	4	5
3: Depression	4	4
4: Suicidality	1	1
5: Guilt	3	3
6: Hostility	1	1
7: Elevated mood	1	1
8: Grandiosity	1	1
9: Suspiciousness	1	1
10: Hallucination	1	1
11: Unusual thought content	1	1
12: Bizarre behavior	1	1
13: Self-neglect	1	1
14: Disorientation	1	1
15: Conceptual disorientation	1	1
16: Blunted affect	3	1
17: Emotional withdrawal	3	1
18: Motor retardation	2	1
19: Tension	3	3
20: Uncooperativeness	1	1
21: Excitement	1	1
22: Distractibility	1	1
23: Motor hyperactivity	1	1
24: Mannerisms and posturing	1	1
Total	39	35

signs of discomfort. Greta reports that she is concerned about her sister and attends groups as she is brought by her family but remains silent because "I don't know what to talk about or what to answer". To the questions about her work and her relationship with her family, she responds in a general way not finding examples to support her answers. Though hardly explored, Greta shows clinically relevant anxious and depressive symptoms, as confirmed by the results of BPRS (39), HAM-A (16) and HAM-D (18) (tables 1-3): low mood, hypobulia, hypooedonia, low self-esteem, worries, insomnia and irregular alvo.

The MMPI-2 profile is valid but presents an exacerbation of symptoms. It suggests an endogenous depression and anxiety that Greta is unable to exter-

Table 2. Assessment at T0 and T1: HAM-D.

HAM-D		
Item	T0	T1
1: Depressed mood	3	3
2: Feelings of guilt	1	1
3: Suicide	0	0
4: Initial insomnia	2	2
5: Insomnia: middle in the night	0	0
6: Delayed insomnia	0	0
7: Work and activities	2	2
8: Retardation	1	0
9: Agitation	1	1
10: Psychic anxiety	3	4
11: Somatic anxiety	1	1
12: Gastrointestinal symptoms	1	1
13: General somatic symptoms	1	1
14: Genital symptoms	1	1
15: Hypochondriasis	0	0
16A: Loss of weight	0	0
16B: Loss of weight	0	0
17: Insight	1	0
18A: Diurnal variation	2	2
18B: Diurnal variation	2	2
19: Depersonalization and derealization	0	0
20: Paranoid symptoms	0	0
21: Obsessional and compulsive symptoms	0	0
Total (17 items)	18	17

nalize due to emotional closure, a tendency to live internally with her own emotions, poor interaction with others and poor expressiveness. The profile shows, briefly, an emotional and social alienation that can make her experience feelings of inadequacy and social discomfort.

Greta got a high total score in both TAS-20 (75) and TSIA (43), positive for alexithymia and nearly three standard deviations (SD) above the normative values. In particular, the DIF and DDF factors (the macrofactor Affect Awareness of TSIA) are two SDs higher than the normative sample.

Also, the factor Operative thinking (OT) of TSIA, sum of EOT and IMP, is more than two SDs above the normative samples. Similarly, EOT in TAS-20 (26) is 2 SDs higher than the mean. This indicates a deficit in symbolic language and imaginative thin-

Table 3. Assessment at T0 and T1: HAM-A.

HAM-A		
Item	T0	T1
1: Anxiety	3	4
2: Tension	2	2
3: Fears	1	1
4: Insomnia	2	2
5: Intellectual symptoms	2	2
6: Depressed mood	3	3
7: Muscular symptoms	1	1
8: Sensory symptoms	0	0
9: Cardiovascular symptoms	0	0
10: Respiratory symptoms	0	0
11: Gastrointestinal symptoms	1	1
12: Genitourinary symptoms	1	1
13: Autonomic symptoms	0	0
14: Behavior at interview	0	0
Total	16	17

king. This aspect determines poor introspective abilities and a non-use of one's own internal states to increase self-awareness.

Snoezelen Multisensory Room

The Snoezelen method was the brainchild of two Dutch therapists, Jan Hulsege and Ad Verheul^{4,6} (1970s). "Snoezelen" comes from the combination of two Dutch words 'snuffelen' and 'doezelen' which mean 'to explore' and 'to relax,' respectively. Noting that their patients, who were intellectually disabled, responded positively to sensory stimuli, they set up a multisensory tent, a place created specifically to stimulate through the five senses. Multisensory therapy is usually carried out in a dedicated room where patients experience a range of unpatterned visual, auditory, olfactory, and tactile stimuli²⁹. Each room can be designed with the most appropriate combination of devices for the patients for whom they are intended, thus creating a specific balance between the containment function, aimed at relaxing and reducing states of tension and arousal, and the stimulation function, oriented towards exploration and play³⁰.

The SMR in our Psychiatric Unit is about 30 square meters and it is characterized by:

- a LED ceiling with luminous panels mimicking a starry sky;

Table 4. Assessment at T0 and T1: TAS-20 and TSIA.

	T0	T1	International sample	Italian sample
TAS-20				
F1: DIF Difficulty Identifying Feelings	25	27	14.4 ± 5.2	14.6 ± 6.0
F2: DDF Difficulty Describing Feelings	24	21	12.5 ± 4.2	13.1 ± 4.8
F3: EOT Externally Oriented Thinking	26	18	18.7 ± 4.7	17.1 ± 4.9
Total	75	66	45.6 ± 11.3	44.7 ± 11.3
TSIA				
F1: DIF Difficulty Identifying Feelings	8	8	2.2 ± 2.1	3.8 ± 2.6
F2: DDF Difficulty Describing Feelings	12	11	4.7 ± 3.5	5.1 ± 2.7
F3: EOT Externally Oriented Thinking	12	9	5.0 ± 3.3	6.1 ± 3.0
F4: IMP Imaginal Processes	11	9	4.5 ± 2.6	4.4 ± 2.4
Macrofactor AA Affect Awareness	20	19	6.9 ± 5.2	8.9 ± 4.6
Factor OT Operative Thinking	23	18	9.5 ± 5.1	13.8 ± 4.6
Total	43	37	16.4 ± 9.0	18.4 ± 7.9
International sample: mean and standard deviation of the normative reference sample of TAS-20 ²⁶ and TSIA ²⁷ . Italian sample: mean and standard deviation of the normative reference sample of the TAS-20 ²⁸ and the TSIA ¹⁹ .				

- a chaise longue which offers the opportunity to perceive the sound and the vibrations of music and selected aromas (though customizable, in this case we applied classic music and orange and lavender scent);
- a bubble column: a moving stream of bubble in an illuminated tube of water which gives a variety of stimuli: visual (bubbles and customizable LED colors, directly selectable in autonomy by the user), auditive, and tactile (sensation of vibration while touching the column);
- an armchair facing the projection of multiple moving butterflies;
- a “maternage” embracing armchair: placed in a space enclosed by curtains with built-in LED lights, the patient can sit on it and envelope her/himself under the weight of the “arms” of the armchair.

Treatment

After the first assessment, Greta was treated ten times, in a period of five weeks – twice a week – in

the SMR with visual, auditory, and olfactory stimulation. Greta stood for 5 minutes in front of the bubble column, then spent 15 minutes in each of the three armchairs (chaise longue, butterfly and “maternage” in this order). Every session lasted forty-five minutes and was carried out with the same operator who, at the end, asked Greta about her state of well-being and emotions.

Second Assessment (T₁)

During the final interview, Greta shows an increased reciprocity in gaze and answers. She reports how the SMR was a space where she “could stay without stress” and felt “at ease”. When questioned about her own emotions, she states that she realized that she often has difficulty in understanding what she feels which causes her much suffering and confusion.

At T₁, anxious and depressive symptoms are not significantly altered as confirmed by the score of BPRS (35), HAM-D (17) and HAM-A (17) (tables 1-3). As concerns TAS-20 and TSIA, Greta there is

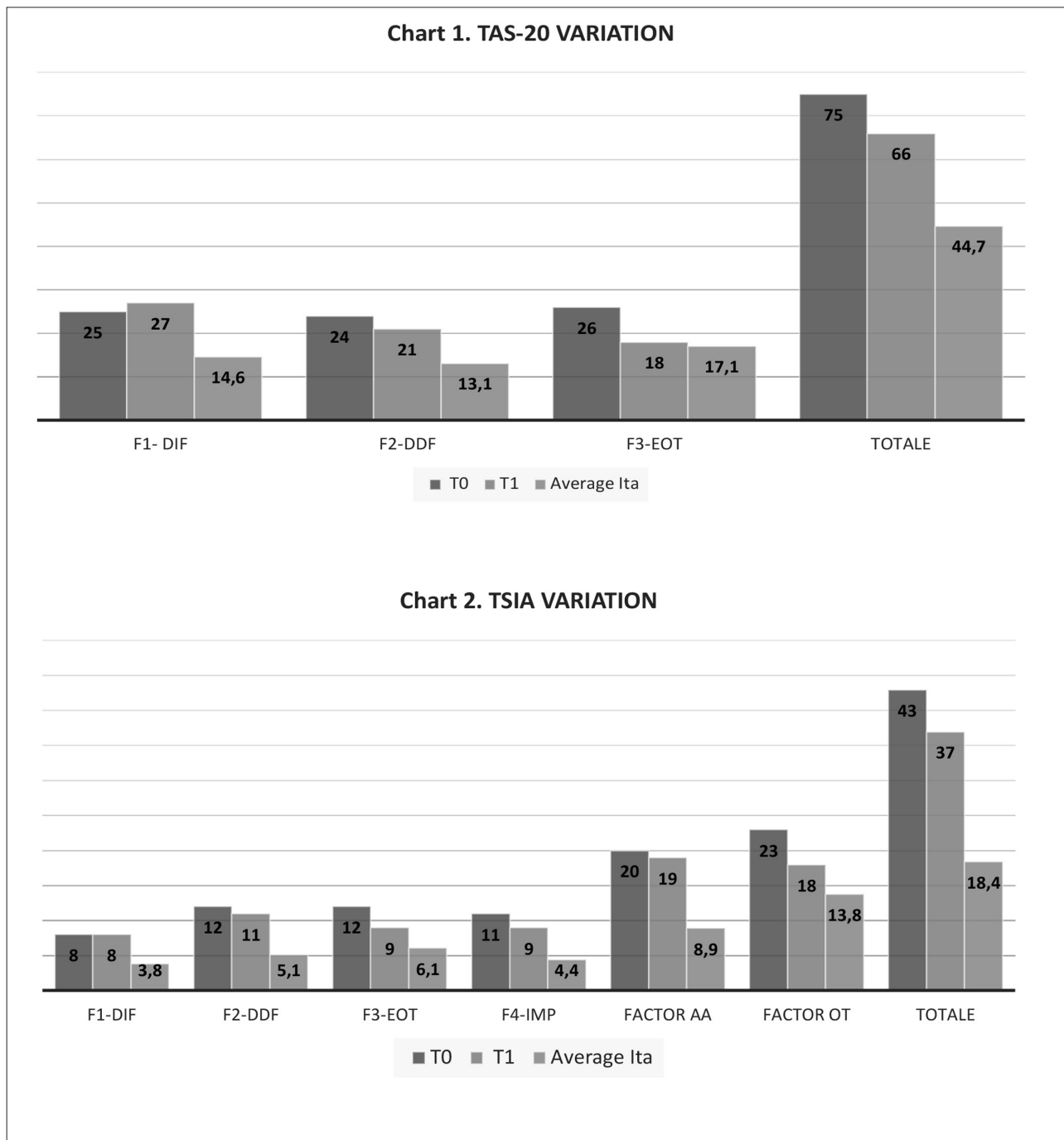


Figure 1. TAS-20 and TSIA variation.

an evident reduction of the total score (66 and 73, respectively). During the administration of the TSIA Greta provides some examples that better describe her difficulty in perceiving her affects. Indeed, she states that she feels negative emotions as a sort of “inner turbulence” which calls her away from her daily activities and hardly ever experiences positive sensations. Therefore, she perceives when her feel-

ings become negative without being able to understand what she feels or process what she feels according to the context.

It is possible to notice the reduction of factor EOT both in TSIA (9) and in TAS-20 (18, in line with normative samples). In the TSIA, Greta shows a slight difficulty in the ability to consider her feelings to solve a personal problem, to talk about feelings

rather than events and to use the processing of past emotional experiences to orientate to the choices of the present. On the other hand, there is moderate difficulty in understanding why events go in a certain way and in basing herself on her feelings to make choices and to know herself better. Greta scored 9 in IMP of TSIA: she was still dry in her answers and the score is one SD above the mean of normative samples.

After SMR treatment

After SMR treatment, Greta appears to have got an increased and more vivid feeling of responsibility and neglect related to her family that emerges from the improved ability of narration of her own life and emotions. She describes how her parents seem to have focused their attention to Greta's sister's needs and shared with her the responsibility of caregiving of their elder daughter. Greta claims to have grown with the conviction that her parents know that she is strong so that she always tries to get by of her own and even take care of the rest of the family. An example for that is the renunciation of attending university and the decision to find a work for the sustenance of the family.

With the newly better understood psychological uneasiness, Greta acquires a stronger will to feel better: in a month from the end of SMR treatment, Greta decides to ask for professional help and she gets the first psychiatric consultation in a separate service of our psychiatric unit.

Discussion

The analysis of the results of the first assessment clearly shows Greta's difficulties in facing emotions. Although Greta easily recognizes the sensations perceived by her body, she has considerable difficulty in identifying emotions. This difficulty is endorsed by both scales among which the score attributed to the identification of emotions is the most altered. Moreover, the results suggest poor interest and incapacity of introspection with consequent impaired ability of reflection on and description of her own emotions. As far as imaginative processes are impaired, Greta is extremely coarse in her answers and does not show any fantasy or interest in developing or increasing imaginative-fantastic processes in favor of a cognitive structure oriented towards pragmatism. This set of items evaluates the general orientation of the style of thinking by highlighting the attention to external people and events rather than to "internal experiences": in particular, the ability to use knowledge of herself and her emotional states as a compass.

The profile obtained from the T_1 scores, while re-

maining in the alexithymic area, is less severe than T_0 as confirmed by both TSIA and TAS-20 scores. These results suggest that Greta is not able to identify her own emotional states which are subjectively experienced as "something". The natural consequence is again the deficit in the ability to describe these emotional states to others. It is interesting that, after the sessions in the SMR, despite the improvement of total and EOT scores, DIF factors appear to have worsened. Given the connection between these two areas, a possible explanation for this is that Greta's newly acquired awareness of her condition of alexithymia could lead her to a stronger experience of her difficulty in identifying her feelings.

Through the monitoring of body sensations and emotions emerged during the sessions, Greta seemed to learn to pay attention to her own interiority and fragilities within the window of tolerance. During the multifamily meetings and the first interview Greta showed evident discomfort in facing directly affective topics with an associated poor spontaneous speech while after SMR seems willing to externalize her newly recognized and still vague suffering deriving from her family issues.

From the point of view of integrated treatment, the use of the SMR could represent a potentially useful technique for the care of patients with a significant level of alexithymia which has been demonstrated to undermine the effectiveness of treatments and increase the risk of dropout³¹. Some of the peculiarities of the SMR may make this approach effective:

1. The SMR can be considered a bottom-up technique, since one of its prerogatives is the possibility to activate several sensory pathways combining them in a controlled way in the various treatment steps.
2. The SMR treatment can be thought of as a "minimally invasive" one which may avoid excessive discomfort for the patient. As a matter of fact, he/she can keep the control of the treatment: sensory stimulations can be refused or adjusted in intensity and/or quality. During the administration, patients are not required to share internal experiences which may be particularly difficult and uncomfortable for individuals with alexithymia, in particular during the early stages of the therapeutic pathway.
3. The patient remains the active protagonist even during the post-treatment interview: he/she is free to focus only on bodily sensations or decide to share and face the potentially frustrating mental exploration. Structured in this way, the interview could, however, represent a sort of metacognitive intervention, as it induces the patient to reflect *in vivo* on the states experienced during the treatment.

Conclusions

The effectiveness of the SMR treatment in the psychiatric field is still under investigation. It could be a versatile tool in psychiatry. The multiplicity of devices within SMR and the flexibility of their combination make it a possible treatment for patients suffering from different conditions, in different contexts and with different purposes, from the containment of the patient with high arousal in an acute inpatient setting to the first stages of an outpatient integrated treatment. After this treatment, Greta seemed to have her condition of alexithymia improved and autonomously decided to have a psychiatric consult. Though promising, the reduction of Greta's alexithymia scores is a result that needs to be confirmed with larger-scale studies.

Declaration: informed consent was obtained from the individual participant included in this case report.

Conflict of interests: the authors have no conflict of interests to declare.

References

1. Vendittelli N, Veltro F, Oricchio I, Cappuccini M, Roncone R, Simonato P. L'intervento cognitivo-comportamentale di gruppo nel Servizio Psichiatrico di Diagnosi e Cura. Milano: Edi.Ermes, 2016.
2. Taylor GJ, Bagby RM, Parker JDA. I disturbi della regolazione affettiva. Roma: Giovanni Fioriti Editore, 2000.
3. Hogg J, Cavet J, Lambe L, Smeddle M. The use of 'Snoezelen' as multisensory stimulation with people with intellectual disabilities: a review of the research. *Res Dev Disabil* 2001; 22: 353-72.
4. Chung JC, Lai CK, Chung PM, French HP. Snoezelen for dementia. *Cochrane Database Syst Rev* 2002; (4): CD003152.
5. Novakovic N, Milovancevic MP, Dejanovic SD, Aleksic B. Effects of Snoezelen-Multisensory environment on CARS scale in adolescents and adults with autism spectrum disorder. *Res Dev Disabil* 2019; 89: 51-8.
6. van Weert JC, van Dulmen AM, Spreeuwenberg PM, Ribbe MW, Bensing JM. Effects of snoezelen, integrated in 24 h dementia care, on nurse-patient communication during morning care. *Patient Educ Couns* 2005; 58: 312-26.
7. Lancioni GE, Cuvo AJ, O'Reilly MF. Snoezelen: an overview of research with people with developmental disabilities and dementia. *Disabil Rehabil* 2002; 24: 175-84.
8. Lee S, Cox A, Whitecross F, Williams P, Hollander Y. Sensory assessment and therapy to help reduce seclusion use with service users needing psychiatric intensive care. *J Psychiatr Intensive Care* 2010; 6: 83-90.
9. Baillon S, Van Diepen E, Prettyman R. Multi-sensory therapy in psychiatric care. *Adv Psychiatr Treat* 2002; 8: 444-50.
10. Nemiah JC, Sifneos PE. Affect and fantasy in patients with psychosomatic disorders. In: Hill OW (ed). *Modern trend in psychosomatic medicine*. London: Butterworths, 1970.
11. Sifneos PE. The prevalence of 'alexithymic' characteristics in psychosomatic patients. *Psychother Psychosom* 1973; 22: 255-62.
12. Nemiah JC. Alexithymia: theoretical considerations. *Psychother Psychosom* 1977; 28: 199-206.
13. Bagby RM, Parker JD, Taylor GJ. The twenty-item Toronto Alexithymia Scale. I. Item selection and cross-validation of the factor structure. *J Psychosom Res* 1994; 38: 23-32.
14. Bagby RM, Taylor GJ, Parker JD. The Twenty-item Toronto Alexithymia Scale. II. Convergent, discriminant, and concurrent validity. *J Psychosom Res* 1994; 38: 33-40.
15. Taylor GJ, Bagby RM, Parker JD. The 20-Item Toronto Alexithymia Scale. IV. Reliability and factorial validity in different languages and cultures. *J Psychosom Res* 2003; 55: 277-83.
16. Caretti V, La Barbera D, Craparo G. La Toronto Alexithymia Scale (TAS-20). In: Vincenzo Caretti V, La Barbera D (eds). *Alessitimia. Valutazione e trattamento*. Roma: Casa Editrice Astrolabio - Ubaldini Editore, 2005.
17. Caretti V, Schimmenti A. The assessment of affective dysregulation with the Toronto Structured Interview for Alexithymia (TSIA). *Noos* 2011; 17: 45-58.
18. Taylor G, Bagby M, Caretti V, Schimmenti A. The assessment of alexithymia with the TSIA. Milano: Raffaello Cortina Editore, 2014.
19. Caretti V, Porcelli P, Solano L, Schimmenti A, Bagby RM, Taylor GJ. Reliability and validity of the Toronto Structured Interview for Alexithymia in a mixed clinical and nonclinical sample from Italy. *Psychiatry Res* 2011; 187: 432-6.
20. Badaracco JG, Naracci A. La psicoanalisi multifamiliare in Italia. Torino: Antigone, 2010.
21. Pancheri P, Sirigatti S. MMPI-2 (Adattamento Italiano). Firenze: Organizzazioni Speciali, 1995.
22. Butcher J, Derksen J, Sloore H, Sirigatti S. Objective personality assessment of people in diverse cultures: European adaptations of the MMPI-2. *Behav Res Ther* 2003; 41: 819-40.
23. Morosini P, Roncone R, et al. Presentazione dell'adattamento italiano della Brief Psychiatric Rating Scale, versione 4.0 ampliata (BPRS 4.0). *Rivista di Riabilitazione Psichiatrica e Psicosociale* 1994; 3: 195.
24. Hamilton M. The assessment of anxiety states by rating. *Br J Med Psychol* 1959; 32: 50-5.
25. Hamilton M. A rating scale for depression. *J Neurol Neurosurg Psychiatry* 1960; 23: 56-62.
26. Parker JDA, Taylor GJ, Bagby RM. The 20-Item Toronto Alexithymia Scale-III. Reliability and factorial validity in a community population. *J Psychosom Res* 2003; 55: 269-75.
27. Bagby RM, Taylor GJ, Parker JDA, Dickens SE. The development of the Toronto Structured Interview for Alexithymia (TSIA): item selection, factor structure, reliability, and current validity. *Psychother Psychosom* 2006; 75: 25-39.
28. Bressi C, Taylor GJ, Parker JDA, et al. Cross-validation of the factor structure of the 20-Item Toronto Alexithymia Scale: an Italian multicenter study. *J Psychosom Res* 1996; 41: 551-9.
29. Baker R, Bell S, Baker E, et al. A Randomised Controlled Trial of the Snoezelen Multi-Sensory Environment for Patients with Dementia. *Br J Clin Psychol* 2001; 1: 81-96.
30. Orofino E. Plurisensory stimulation: the Snoezelen method between myth and reality. *Plurisensory stimulation in rehabilitation: use of Snoezelen rehabilitation environments today*. 2004.
31. Terock J, Janowitz D, Grabe HJ, Freyberger HJ, Schneider W, Klauer T. Alexithymia and psychotherapeutic treatment motivation: main and interactional effects on treatment outcome. *Psychother Psychosom* 2017; 86: 185-6.

Corresponding author:
Dr. Carola Di Taranto
Psychiatric Rehabilitation Therapist
Department of Systems Medicine
University of Rome "Tor Vergata"
Via Montpellier 1
00133 Rome, Italy
E-mail: carola.ditaranto@gmail.com