Journal of Depression and Anxiety
ISSN: 2167-1044
OPEN ACCESS Freely available online
Research Article

Development, Feasibility and Outcome of Attachment Integrated Therapy for Persistent Depressive Disorder: A Pilot Study

Hassan Rahioui[1], Lana Kheirallah[2*], Jean Belbeze[3]

[1]Department of Psychiatry, Attachement Integrated Therapy Center (CTIA), Groupe Hospitalier Universitaire, Site Sainte Anne Paris, France;[2]Department of Physchiatry and Neuroscience, Attachement Integrated Therapy Center (CTIA), Groupe Hospitalier Universitaire, Site Sainte Anne Paris, France;[3]Department of Neuroscience, Attachement Integrated Therapy Center (CTIA), Groupe Hospitalier Universitaire, Site Sainte Anne Paris, France

ABSTRACT

Objectives: Persistent Depressive Disorder (PDD), newly developed in DSM-5, merges the diagnoses of chronic major depressive disorder with that of dysthymia. It is disabling and often difficult to treat. In psychotherapy, only the Cognitive Behavioural Analysis System of Psychotherapy (CBASP) has shown an interest in this pathology, especially in combination with antidepressants. However it has not taken attachment into consideration. With this limitation, we felt it was essential to integrate the attachment dimension and Attachment Integrated Therapy (AIT) was developed specifically for PDD. The purpose of the study was to assess the feasibility and results, found at the beginning (T1) at end of therapy (T2), 6 months after therapy (T3), and one year after therapy (T4), This article will present our preliminary results (T1 and T2), T3 and T4 are to follow.

Methods: This study included eight patients, suffering from PDD, according to the DSM-5, followed in an outpatient setting, at the Sainte-Anne hospital in Paris. The assessments were conducted on three levels: Depressive symptomatology (MINI, BDI-II), Attachment (RSQ) and Social Support (SSQ6).

Results: The BDI-II-results over both assessment times show an evolution, with an average reduction of depressive scores of 50%. In addition, attachment insecurity as reflected in attachment styles as well as representations of oneself and others also improves.

Conclusion: The findings on outcomes as well as on feasibility of the outpatient AIT program are promising. Moreover, this study suggests that chronic activation of the attachment system may be a predictor of the development of depressive persistent disorder. When treating depressive persistent disorder, attachment should therefore be addressed.

Keywords: Attachment; Persistent depressive disorder; Brief therapy; Attachment therapy; Depression

INTRODUCTION

About 3% to 6% of the adult Western countries suffer from depressive disorders [1,2]. It is a public health problem with major health and economic repercussions [3]. On an individual level, Persistent Depressive Disorder (PDD) results in a profound and prolonged impairment in a person's function. In comparison with the characterized depressive episode, PDD is distinguished by a more marked negative impact on the quality of life, a greater risk of hospitalization and suicide attempts, an often-earlier onset, and duration of several years to several decades [4-6].

The treatment of PDD is faced with a high rate of treatment failure or partial remission [7]. The proportion of patients who are unresponsive, do not achieve remission or develop chronic residual symptoms is estimated at almost half of depressed patients [2,8]. In terms of psychotherapy, the only specific psychotherapy adapted to chronic depression is the Cognitive-Behavioral Analysis System of Psychotherapy (CBASP) [9]. It is an integrative therapy for adults with chronic depression that combines components of cognitive, behavioral, interpersonal, and psychodynamic therapy. The initial trial showed that it had effects comparable to those of antidepressants and significantly increased efficacy when combined with medication [10]. Subsequent trials, however, showed mixed results and the relative efficacy of CBASP, antidepressants or their combination remains to be clarified [11]. The European PA Guidance Group on CD considers psychotherapy and pharmacotherapy to be effective in chronic depression and recommends both approaches [12].

Correspondence to: Lana Kheirallah, Department of Bioinformatics and Biostatistics, University of Louisville School Public Health and Information Science, Louisville, United States, E-mail: l.kheirallah@ghu-paris.fr

Received: 06-May-2022, Manuscript No. JDA-22-15594; **Editor assigned:** 11-May-2022, PreQC No. JDA-22-15594(PQ); **Reviewed:** 25-May-2022, QC No. JDA-22-15594; **Revised:** 31-May-2022, Manuscript No. JDA-22-15594(R); **Published:** 07-Jun-2022, DOI:10.35248/2167-1044.22.11.464

Citation: Rahioui H, Kheirallah L, Belbeze J (2022) Development, Feasibility and Outcome of Attachment Integrated Therapy for Persistent Depressive Disorder: A Pilot Study. J Dep Anxiety.11:464

Copyright: © 2022 Rahioui H, et al. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

The duration of treatment seems to be an important factor to consider for PDD. CBASP suggest 31 sessions in their protocol, which is in adequacy with the conclusion of a meta-analysis on chronic major depression and dysthymia: it was noted that at least 18 sessions are required for psychotherapy to have an optimal effect. Some evidence suggests that both specific (ex, skill learning) and nonspecific (ex, therapeutic alliance) factors independently contribute to treatment outcomes [13]. In this light, patients with PDD often show a poor therapeutic response to classic types of psychotherapy, which can be considered to be partially caused by the greater difficulty in establishing a therapeutic relationship [12]. In addition, interpersonal dysfunctions seem to play a major role in maintaining a depressive state and are the subject of new psychotherapeutic approaches [12]. It emerges that to be adapted to this disorder, therapy should take into account the therapeutic relationship, develop specific strategies and integrate the complicated past.

Attachment Integrated Therapy (AIT)

CBASP is until now the only therapy showing some positive results on PDD, however it does not take into consideration one of the biggest factor of vulnerability for chronic depression: attachment, and thus can have some limitation with insecure patients. Indeed, attachment insecurity is increasingly tackled in literature without being taken into consideration in conventional therapies. Considering this, the Attachment Integrated Therapy was adapted for PDD from an attachment-based approach aimed at acute depressive disorder. Indeed, we felt it was essential to integrate the attachmental dimension in this conception since we raise relational problems, especially those that originate in early relationships. First, a presentation of the broad outlines of the theory of attachment is necessary.

Attachment theory

Bowlby [14-16] sees attachment as an innate psychobiological system whose functioning serves to protect the child by pushing him to seek proximity and contact with people who usually take care of himself (attachment figure) when he encounters potentially threatening or dangerous situations. He later considered that the two concomitant functions of attachment have are "protection" and "exploration." He described individual differences in this dual process: Interactions with an available and responsive attachment figure when needed, facilitate the optimal functioning of the attachment system, and promote a sense of attachment security that makes it possible to explore the environment with curiosity and allow the child to engage effectively with other people. This sense of security will later be rooted in positive mental representations of oneself and others, which Bowlby refers to as “Internal Working Models” (IWM). Otherwise, negative IWM are created, and emotional regulation strategies will be adopted and will appear in the child’s future relationships. Bowlby’s work was proved bye Mary Ainsworth’s [17] observations stemming from “the strange situation” that allowed her to point out three types of attachment modalities; secure attachment, anxious-avoidant insecure attachment, and anxious-resistant insecure attachment [18]. A fourth disorganized style was later identified by Main and Solomon [19].

The descriptions of romantic relationships in adults, related to attachment, based on the work of Hazan and Shaver [20] are similar to the typology proposed by Ainsworth et al. [18]. Rather on a global interpersonal level, Bartholomew and Horowitz [21] founded their assessment of attachment on the combination of self-and other IWM and propose to separate two detached attachments: the "detached" and the "fearful." This dichotomy led to the development of the Relationship Questionnaire (RQ).

The activation of the attachment system (IWM) is another aspect to know. The subject who feels that his attachment figure is available and likely to meet his needs, the sense of his attachment security is strengthened, thus facilitating the use of balanced emotional regulation strategies that aim to eliminate the stress associated with the threat. Extending this hypothesis, Shaver and Mikulincer [22] evoke emotional dysregulation in an anxious-preoccupied person as the perception of the unavailability of the attachment figure leads to a feeling of insecurity, which exacerbates the distress caused by the assessment of a threat situation. This condition causes the subject to frenetically and energetically attempts to reach the closeness, support, and love of the target. These attempts are called "hyper activation attachment strategies" because they require constant vigilance and intense anxiety until the attachment figure is perceived as available and supportive. If a detached person has learned that relying on attachment figures is not a source of security to deal with threats, his behavior will be that of the one who will minimize these threats, inhibit the concerns and related negative emotions. These attachment strategies are called "deactivation".

Attachment and depression

Although depression is multifactorial in origin, we now know that insecure attachment styles are a major risk factor for developing depression [23]. On this subject, we need to recall first, that acute depression has as a vulnerability factor the attachment insecurity developed in childhood and as a decompensation factor the stress experienced in a situation involving a current attachment figure [24,25]. In previous studies, anxious-preoccupied attachment is significantly associated with long-term depression [26] and some links between attachment disorder and PDD have also been established in previous publications [27]. This show us that attachment insecurity is implicated in the occurrence of depression within stress models, insofar as it is associated with emotional dysregulation, limiting adaptation to stress [28,29]. Therefore, we can say that the connection between attachment and PDD is mediated by emotional regulation. However, it is still necessary to know the underlying mechanism, which is at work in these interactions and then, to describe what happens at the level of this emotional regulation according to the attachment styles. Indeed, when faced with a stressful situation, insecure people activate their attachment system. Thus, anxious-preoccupied over activate their emotions while dismissive-avoidant ones deactivate them. These behaviors are called secondary attachment strategies, compared to primary attachment strategies related to innate emotional regulation [30]. For Shaver and Mikulincer [22] the exhaustion of these secondary attachment strategies is at the root of acute depressive decompensation in insecure people. In total, we conclude that emotional dysregulation should be taken into account in its attachment dimension, i.e. involving an attachment figure and being expressed in the context of a stressful situation, threatening the attachment link.

The development of AIT

The rationale behind the therapy: Like CBASP, AIT focuses on interpersonal relationships. Nevertheless, AIT differs from CBASP by integrating the notion of attachment, which is at the multifactorial etiology of PDD, at the level of the therapeutic

relationship, of the psychopathology and with the use of specific techniques. AIT works in each interpersonal relationship by considering it according to interactional affective ties and strategic emotional ties. The latter are related to primary or secondary attachment strategies. They come into play when activating the attachment system, which is composed of representations of oneself and the other. We will call the secondary attachment strategy: strategic emotional dysregulation (hyper activation or deactivation). Specifically, AIT works in problematic interpersonal relationships where Situations Activating the Attachment System (SAAS) involve an attachment figure. All in all: The application of this process to PDD is based on the idea of an early and chronic activation of the attachment system as well as on the persistence of a stressful situation (SAAS) involving a current attachment figure. The early age of onset of this disorder (frequently before age 21) [31], argues in favor of an activation of the attachment system present well before the patient's current attachment relationship. This suggests that, unlike acute depression, the past is both a source of vulnerability and decompensation in PDD, and that this disorder is perpetuated in a current attachment relationship. To summarize, we could say that PDD follows the weakening of the secondary attachment strategy (strategic emotional dysregulation) whose outbreak is consecutive to an early onset and chronic activation of the attachment system.

In light of all these developments, we postulate that in order to improve these current attachment relationships, the patient must reconsider their early (parental) attachment history, in other words, their IWM, through their representations of themselves and others.

Intervention in AIT: To summarize the psychopathology as described above, we would say that faced with significant stress, the activation of this insecure system involves, depending on each style of attachment, a complex mechanism of which the three main elements are the representations of self and others, strategic emotional dysregulation (the secondary attachment strategy) and the alteration of interpersonal interactions. AIT is therefore based on a structured articulation of these three dimensions, through a link between the past and the present according to a repetitive parental attachment modality that is re-experienced in the current attachment relationship. Thus, AIT was developed as a modular approach, in order to meet the different needs of patients with PDD:

• The development of an attached, non-transferential therapeutic relationship.

• The application of specific techniques targeting the subject's attachment: strategic emotional regulation and representational re-elaboration. To be able to access these mostly unconscious [15] representations, without using psychoanalytical techniques, we start from the patient's current relationship, on the basis of a connection between his weakened strategic emotional dysregulation and his PDD before working on his early relationships

• Then back to the actual relationship with the implementation of intervention strategies supporting the resolution of SAAS: interactional modulation.

The structure of AIT: AIT is a time-limited, reflective, and clarifying approach that stays true to the spirit of attachment theory and considers attachment insecurity to be complex so as not to reduce it to conflict or distortion. The basis of AIT's work is that of attachment insecurity which, once activated, generates a strategic emotional dysregulation, which participates actively in the depressive decompensation and is underpinned by representations of self and others. AIT incorporates adjustment variables based on patient profiles. In this spirit, it offers a number of sessions depending on the subject's attachment style. For dismissing or fearful patients, we consider that they should be given more time than preoccupied patients should. For the first, we recommend at least 24 sessions while for the second at least 20 sessions. Just as the work on strategic emotional dysregulation, regulation is done in such a way as to adapt to the subject's attachment style, in a differentiated targeting of emotional hyper activation and deactivation.

The present study

Hypotheses: In the current study, the primary objective was to assess the feasibility and outcome of the AIT on participants with PDD, and offering an in depth examination of the therapy conducting a pilot study on a few participants.

We suggested four hypotheses:

• There will be a decrease in the intensity of depressive symptoms (BDI) between T1 and T2

• There will be an improvement of the representation of oneself between T1 and T2, therefore we will see an increase on the RSQ representation of self-score

• There will be an improvement of the representation of others between T1 and T2, therefore we will see an increase on the RSQ representation of others score

• The results for attachment styles may change.

METHODOLOGY

Participants

We recruited a cohort of eight patients who met the diagnostic criteria for PDD according to the DSM-5 (Table 1).

Table 1: Diagnostic criteria for PDD in DSM 5 (APA, 2013).

	Diagnostic criteria for PDD in DSM 5
A	Depressed mood for most of the day for at least 2 years.
B	Presence while depressed of two or more of the following:
	- Poor appetite or overeating
	- Insomnia or hypersomnia
	- Low energy or fatigue
	- Low self-esteem
	- Poor concentration or difficulty making decisions
	- Feelings of hopelessness
C	During the 2 year period of the disturbance, the person has never been without symptoms from the above two criteria for more than 2 months at a time.
D	Criteria for MDD may be continuously present for 2 years, in which case patients should be given comorbid diagnoses of persistent depressive disorder and MDD.
E	There has never been a manic episode, a mixed episode, or a hypomanic episode and the criteria for cyclothymia have never been met.

F	The symptoms are not better explained by a psychotic disorder.
G	The disturbance is not due to the direct physiological effects of a substance (e.g., a drug of abuse or a medication) or a general medical condition.
H	The symptoms cause clinically significant distress or impairment in important areas of functioning.

Inclusion criteria: Included are adult patients, men and women, diagnosed with PDD according to DSM-5 criteria, speaking French and able to present for an outpatient consultation during follow-up.

Exclusion criteria: Excluded were patients with a characterized depressive episode added at the time of treatment (double depression) as well as patients with psychiatric comorbidities (psychotic disorders, non-PDD mood disorders, PTSD, OCD, phobias), addictive comorbidities or severe personality disorder. Patients with Generalized anxiety disorder were not excluded from this study.

Protocol: The study is being conducted as a prospective open-label exploratory trial. It takes the form of a case series with time series analysis. This methodology has been proposed for the small-scale study of the effectiveness of psychotherapies [32].

Time scheme: The assessment of the participants consisted of four stages: T1 (initial pre-treatment assessment) for validation of the indication and inclusion in the study; T2 (evaluation at the end of therapy), T3 and T4 (to be reported in the future) (Table 2).

Table 2: Assessment and instruments used.

	Assessment	Instruments
T1	Initial pre-treatment assessment to validate the indication and inclusion in the study	MINI , SCID II, BDI, RSQ, SSQ6
T2	Evaluation at the end of therapy	BDI, RSQ, SSQ6
T3	Evaluation 6 months post therapy *	BDI, RSQ, SSQ6
T4	Evaluation 1 year post therapy*	BDI,RSQ,SSQ6

Note:
MINI: Mini International Neuropsychiatric Interview (Sheehan et al., 1998).
SCID II: Structured Clinical Interview for DSM-IV Axis II Disorder (First et al., 1997).
BDI: Beck Depression Inventory (BDI-II) (Beck et al., 1961).
RSQ: Relationship Scales Questionnaire (Griffin and Bartholomew, 1994).
SSQ6: Social Support Questionnaire 6 (Sarason et al., 1983).
*: to be reported.

Instruments: The diagnosis of PDD was made according to DSM-5 criteria using the Mini International Neuropsychiatric Interview (MINI) [33]. The intensity of the depressive symptoms was assessed with the Beck Depression Inventory (BDI-II) [34], tanslated and validated in french by Bourque and Beaudette [35]. Attachment was assessed with the Relationship Scales Questionnaire (RSQ) [36], translated and validated in French by Guedeney and colleagues in 2010 [37]. We also used the Social Support Questionnaire 6 (SSQ6) created by Sarason and his colleagues [38], then validated in French by Bruchon-Schweitzer and his colleagues in 2003, with good psychometric qualities. Finally, the Structured Clinical Interview for DSM-IV Axis II Disorder (SCID-II) Personality Rating Scale [39].

Statement of ethics: All participants have given by writing their informed consent to participate in this study.

AIT handbook: The number of sessions for each participant depended on the primary attachment assessment (RSQ at T1). The AIT suggests 20 for the participants with a preoccupied insecure attachment style, and 24 sessions for the detached or fearful insecure attachment style (about 6 months). The sessions were 45 minutes long. The written notes of the therapists were the assistive support for the concomitant clinical supervision. The treatment relied on three therapists, two women and one man, each with full AIT training. Two of the therapists were senior experienced psychiatrists and one therapist was a clinical psychologist. The therapists met regularly for clinical supervision and the therapies followed a program adapted from one of the author's manual.

Data analysis: The monitoring of small numbers or even single cases for the identification and evaluation of significant effects within psychotherapies has been validated and many approaches are available [40]. The descriptive approach is based here on the crossing of two methods: The method of visual analyses, which has been validated, allowing the use of quantitative and qualitative data and their comparison on the one hand [41]. On the other hand, the use of parametric and nonparametric statistical analysis for paired data that does not follow the normal distribution; for the comparisons of means, the Student's t-test and the Mann-Whitney test are used. The data were collected from October 2018 to Mars 2021.

RESULTS

The analysis of the characteristics of the participants (Tables 3 and 4) highlights a majority of women (7 out of 8 participants) with an average age of 42.6 years (Table 4). We also note that for six of the eight participants, the age of onset of depressive symptoms is early <21 years [31] except for P1 and P3. In addition, we also notice that half of the participants in our cohort are single (four out of eight). For the rest of the participants P3 and P1 are married, P7 is a widow and P5 is in a relationship. In terms of treatment, we notice that three participants (P3, P8 and P6) had an antidepressant treatment started before the therapy. We also note for two of our participants (P7 and P8) the presence of trauma assessed using the MINI, these patients answered "yes" to the question "have you ever witnessed or suffered a traumatic event" but do not meet the criteria for a PTSD (Post-Traumatic Stress Disorder) (Table 3).

Analysis of the results by scale

BDI: The results obtained on the BDI by the participants over the two stages show an evolution. We notice a decrease in the average of the scores between T1 and T2 of more than half as shown in Table 5. In T1 we obtain a score of 27.13 compared to a score of 7.88 in T2, i.e. an average reduction of more than 50% [42], signing a statistically significant response to the intervention according to Student's t test with $p<0.001$. According to the quotation of the BDI only P3 and P4 still score in T2 on a slight depression. For all other participants, their scores indicate that there is no more depression (Table 4).

Table 3: Gender, status, current age and age at 1st symptoms, additional treatment and presence of trauma.

	Gender	marital status	Age	Age (1st symptoms)	Treatment	Trauma and age of occurrence
P1	F	Married	52	21	No treatment	No
P2	H	Single	39	16	No treatment	No
P3	F	Married	42	30	SSRI	No
P4	F	Single	42	12	SSRI	No
P5	F	In a relationship	32	18	No treatment	No
P6	F	Single	29	18	SSRI	No
P7	F	Widow	53	20	No treatment	Yes: <6 years old
P8	F	Single	52	18	No treatment	Yes: 2 years old

Note: age of onset of symptoms considered early if <21.
SSRIs: Selective Serotonin Reuptake Inhibitors.

Table 4: Descriptive data: Means, standard deviations, ranges for measures.

	Age	BDI		Model of self		Model of others		Satisfaction		Availability	
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
Means	42.63	27.13	7.88	-0.95	1.13	1.02	1.38	26.38	30.5	18.13	20.88
SD	9.22	7.81	6.08	1.85	1.65	1.6	1	3.11	2.62	7.34	4.64
Range	24	21	19	6.05	4.6	4.35	3	9	7	24	13

Notes: BDI : Beck Depression Inventory ; RSQ : Relationship Scale Questionnaire ; SSQ6 : Social Support Questionnaire.
Models of self and other from the RSQ.
Satisfaction and Availability from the SSQ6.

Table 5: Outcome of therapy on depression, attachment style, models and self and others, and social support at T1 and T2.

	BDI		RSQ		Models of self and others		SSQ6	
	T1	T2	T1	T2	T1	T2	T1	T2
P1	37	9	Preoccupied	Secure	Self: -0.85	Self: 0.00	A:14	A:21
					Others: 2.65	Others: 1.50	S:24	S: 27
P2	37	4	Preoccupied	Secure	Self: -3.75	Self: 2.80	A:10	A:23
					Others: 1.05	Others: 2.00	S:26	S: 32
P3	31	19	Dismissing	Secure	Self:2.3	Self:2.2	A:14	A:25
					Others: -1	Others: 2.2	S:31	S: 34
P4	30	14	Fearful	Preoccupied	Self: -1.65	Self: -0.9	A:18	A:15
					Others: -1.25	Others: 0.4	S: 24	S: 28
P5	23	4	Preoccupied	Preoccupied	Self: -2.25	Self: -0.60	A:34	A:18
					Others: 1.05	Others:0.00	S:28	S:30
P6	23	0	Preoccupied	Secure	Self: -1.65	Self: 1.05	A:22	A:28
					Others: 2.15	Others: 0.65	S:22	S: 33
P7	20	7	Secure	Secure	Self: 0.6	Self: 3.70	A:18	A:22
					Others:3.1	Others: 1.30	S:26	S: 28
P8	16	6	Preoccupied	Secure	Self: -0.35	Self: 0.8	A:15	A:15
					Others:0.45	Others: 3	S:30	S:32

Notes: BDI : Beck Depression Inventory ; RSQ : Relationship Scale Questionnaire ; SSQ6 : Social Support Questionnaire.
A: Availability.
S: Satisfaction.

RSQ-representations: The RSQ gives a score on each participant's representations of self and others. The combination of these representations helps categorize the attachment style of participants based on the rating of Griffin and Bartholomew [36]. We can notice with the responses of the participants a positive evolution on the representations of oneself and others. In fact, at T1 the average self-representation scores were -0.95, with only two participants (P3 and P7) with a positive self-model score, which leads to the conclusion that most of the participants' self-representations in T1 were negative (Table 4). However, at T2 we notice a change in the scores which generates an increase in the mean of self-representations which subsequently becomes positive (1.13) with only two participants still having negative self-representations (P4 and P5). These representations, although still negative, seem to have attenuated between T1 and T2 (respectively -0.9 and -0.6). Concerning the representations of others, we notice a stability with an average of the representations of others in T1 of 1.03 and at T2 reaching 1.38 as shown in Table 5. For the only two participants whose representations of others were negative in T1 (P3: -1 and P4:-1.25), we notice that they become positive at T2 (respectively 2.2 and 0.4). These results allow us to conclude here as well, to an improvement in representations of self and others between T1 and T2 (Table 5). Furthermore, statistical analysis on the scores of self-representations and of others highlighted a significant difference between T1 and T2 on self-representations with $p<0.05$.

RSQ-attachment style: In T1 we notice the presence of the four attachment styles with a majority of insecure attachment of the preoccupied type (5 out of 8 participants). For the rest of the participants, we find a detached participant (P3), a fearful (P4) and a secure (P7). In T2 we notice an important change because the majority is found with a secure attachment (6 out of 8 participants), and only two participants still score with an insecure attachment (P4 and P5) (Table 5).

Ssq6: The SSQ6 assesses the social support perceived by the participants by giving a score on the perceived availability of their social support and a score on the satisfaction with this support [43]. As shown in Table 4, we notice an improvement in the availability perceived by the participants between T1 and T2, since in T1 we obtain an average of 18.13 compared to 20.86 in T2. Regarding satisfaction we also notice an improvement in T2 (30.5) compared to 26.38 in T1. In addition, we notice that at T2 the gap between the availability felt by the participants and the satisfaction of their social support narrows for most of the participants except for P6, P7 and P8.

DISCUSSION

Depression

The results obtained in our study highlight a remarkable reduction of more than half of the depressive symptomatology of our participants [44]. Moreover, we get an average of scores on the BDI, between T1 and T2, allowing us to speak of remission of the depressive symptomatology (Table 4). Moreover, this decrease has been proven significant, highlighting the change regarding the depression for our eight participants. This change validates our first hypothesis.

Three patients kept their antidepressants. Taking into consideration the long duration of this intake, it was not possible to carry out a long weaning process in full therapy without destabilizing the patient and affecting the therapy. The pharmacological treatment must be regarded as an independent variable that may have affected the treatment outcome in some patients mainly P3, P4, P6. However, this drug treatment prescribed for a long time had not brought any clinical improvement. In addition, five patients did not have medication during therapy. At least this suggests that for some patients, AIT alone might be sufficient.

Attachment

Representations of self and others (RSQ): Regarding representations, we note that at the beginning of therapy at T1, most participants had negative representations of self and/or others (Table 5). At T2, self-representations improve significantly while the representations of others slowly increase. Our second and third hypotheses are therefore validated. In addition, we see a balanced change between representations of self and others in T2 since the numbers are getting closer (1.13 vs. 1.38). Therefore, the change was not a radical shift from one extreme to another.

Attachment styles (RSQ): The literature highlights that an insecure attachment style generates interpersonal difficulties and is correlated with life events triggering depressive episode [43]. The data obtained in our study point in this direction since at T1 most of our participants have an insecure attachment style. We notice that at the end of therapy, for a large majority of our participants, there is a change on their attachment style, or at least an improvement of their insecurity, which validates our third hypothesis. Indeed, in T1 we find a majority of insecure attachment of the preoccupied type: 6 out of 8 patients. In T2 we find a majority of secure attachment with only two participants with an insecure preoccupied type of attachment (P4 and P5). Moreover, looking more closely at the results of these two participants, we notice that for P4 the attachment style changes from fearful to preoccupied in T2 which highlights a decrease in attachment insecurity. For P5, we distinguish in terms of the scores of representations of oneself and of others, a remarkable improvement in representations of oneself which is remarkably close to neutral and therefore to a secure attachment. All of these findings argue for the importance of attachment in the PDD.

Our intuition that fewer sessions are necessary for preoccupied patients seems to be confirmed since, at T2, apart from P5 (who remains relatively preoccupied), all the patients scored “secure” on the RSQ. In addition, an analysis of the self-representations for P5 reveals that it passes in T1, from -2.25 to -0.60 in T2, a figure which is not far from the base threshold (his representations of the others being 0.00 at T2). Yet in the literature, there is mistrust about the progress of these patients in therapy. They often appear easier to deal with at first and are often eager to discuss their relationship difficulties [45]. In addition, we can read in the literature that preoccupied patients are more difficult to treat because their system of representations is intimately linked to emotions that are rooted in an apprehension for difficult events in their life [46]. The AIT, by working on the links between these attachment emotions and the representations of the subject, brings a change in a short time frame. Therefore, it is all about precise and specific targeting of the mechanisms involved in attachment insecurity more than the duration of the therapy.

Patients P3 and P4: By analyzing the results of our cohort, we notice that for two of our participants, the evolution is different. In fact, P3 and P4 are the only ones to have a BDI score greater than 11 at T2 (Table 4). Although there was a significant reduction in their depressive symptoms, which went from severe to mild

intensity, we wondered about the explanatory hypotheses of these scores. Looking more closely at the results of these two participants on the other scales, we notice that they are the only ones to have negative representations of others at T1. It is difficult to hypothesize based only on two patients. Nevertheless, the reflection may open pathways of exploration in other future studies as well as areas for improvement of AIT.

For P4, this is understandable because when it comes to attachment insecurity, he comes from afar; from fearful at T1 to preoccupied at T2. Intuitively, it appears necessary to plan for fearful patients (without serious personality disorder), more sessions than those planned for dismissing patients. We could start on a basis of 28 sessions minimum. In addition, looking at his responses on the BDI we notice a decrease in the intensity of all items evenly. Despite everything, this finding, which remains positive, tells us that even a fearful patient can benefit from a favorable development in a short time. This distinction is important to make so as not to be reluctant to include this profile in treatment protocols.

For P3 we do not find this consistency, since his BDI at T2 is 19, which contrasts with his other results in the RSQ. Indeed, his attachment goes from dismissing to secure with remarkable numbers at the level of representations; of oneself, 2.2 and of others, 2.2. Moreover, when we take a closer look at his answers on the BDI, we notice a decrease in the intensity of all the items except “failures in the past, negative feelings towards oneself and critical attitude towards oneself” which remains identical to T1. These items highlight a negative self-esteem, which contradicts the very positive results obtained on the RSQ on self-representations (2.2). The hypothesis could be constructed from the idea that over time, the dismissing through the deactivation of his emotions, ends up having difficulty evaluating them and feeling the positive emotions brought by his change. The evolution of this single dismissing patient from the cohort is very instructive. Indeed, his therapeutic journey suggests that his security of attachment might accommodate, for a time, a certain degree of emotional dysregulation of attachment. However, the latter no longer being motivated by a need to avoid intimacy, becomes part of an automatic reaction, probably linked to representations anchored in procedural memory [47]. Patients explain it well: "I am no longer on autopilot in my emotional reactions. Even when I feel seized by a need to react as before, I can reason with myself and hold back. Thus, my reaction becomes reflexive and effective”. Even for a dismissing patient, his attachment style could evolve favorably within the framework of a therapy, if well personalized. This would contrast with literature. Indeed, dismissing individuals are often seen as resistant to treatment, have difficulty asking for help, and withdraw from help when it is offered [45]. We believe that this opinion should be put into perspective and this resistance when treating the patient should be considered as avoidance linked to attachment insecurity.

This analysis allows us to put forward a hypothesis, that of a probable correlation between BDI and Attachment Emotional Dysregulation (AED) which is not found between BDI and RSQ. This would seem logical because AED and BDI directly evoke emotions. Hence, the need for a real scale measuring this specific emotional reaction to attachment and that it should be distinguished from that related to the subject's temperament.

Finally, it appears that our estimation of the number of sessions as well as the personal adaptation of our therapeutic intervention to the attachment style can be considered as factors of change.

Social support: Priel et al. [48] had already shown in their study that attachment style can negatively affect the perception of social support and Collins and his colleagues in 2004 [49] had shown that depression can affect this perception and satisfaction with social support. It should be known that the notion of availability is an element that is part of what forms the basis of security.

Indeed, Griffin and Bartholomew [36] explain the model of others by "the extent to which the individual generally expects others to be available and support him". Ognibene and Collins [50] report in their literature that people with insecure attachments and especially preoccupied types needed others more compared to people with secure attachment but were less satisfied with this support. The therapy we have conducted seems to lead, in the patients, to an improvement in perceived availability and satisfaction in the relationships as shown in Tables 3 and 5 between T1 and T2. These results should be linked to the joint improvement in attachment and depression.

Trauma and progression of PDD: By analyzing the characteristics of our participants, we noted the presence for two of the eight participants of childhood trauma. These traumas having taken place during childhood and concerning attachment figures of these participants (mother or father), one can suppose that this influenced the representations of oneself and others and on the attachment context. However, by comparing the results of these participants with others, we do not notice any significant difference in the depressive symptomatology in our cohort or in its evolution. This again suggests that attachment insecurity that is more associated with PDD than the trauma. However, trauma can play a role in the development of attachment insecurity [51].

Brief therapy: This shows us that even a brief therapy can have a positive effect on PDD, however it is still necessary to be able to target the intervention. Here, AIT focuses on attachment and includes attachment style as control variables to indicate number of sessions as well as differentiated work on emotional attachment regulation. At this level, we allow ourselves a comparison. In the McCullough's study [52] the average number of therapy sessions of the chronic depression was 31 (± 9.34), with a range of 14 to 44 sessions, without knowing on what basis this distribution was made. In our cohort, the therapy sessions were either 20 or 24 depending on the attachment styles of the patients. Therefore, we are beyond the 18 sessions recommended by Cuijpers and colleagues (2010) and below the 31 sessions used on average by McCullough [52,53] and thus AIT can also be considered as a cost-effective therapy.

Limitations: As this study is exploratory, certain limitations must be recognized. In fact, the cohort being small (8 participants) and mainly composed of women (7 out of 8 participants) with an age range of 24 years, the results are difficult to generalize. Furthermore, the scales found in the literature do not allow us to assess the intensity and type of emotional dysregulation of attachment, central to the work of AIT. Indeed, the literature focuses only on temperamental emotional dysregulation, which is therefore not suitable for evaluating attachment emotional dysregulation. It would therefore be interesting to develop an appropriate scale in order to be able to identify and evaluate secondary attachment strategies. Finally, although in the short term, the results between t1 and t2 are positive, it is important to note the impact of aid in the long term as well. An evaluation at T3 (at 6 months) and T4 (at 1 year) is planned to assess the maintenance of these positive results.

AIT can therefore be seen as a promising and feasible treatment for people with PDD. However, more studies are needed, especially those which are randomized controlled.

CONCLUSION

To our knowledge, there is no currently available therapy or brief attachment-based approach to treat chronic depressive illness. AIT opens therapeutic prospects not only for strengthening the small therapeutic arsenal targeting PDD, but also, more broadly, it provides an example of the feasibility of an attachment-based therapy to be explored in other disorders. Moreover this study shows that a brief therapy based almost entirely on an attachment approach is possible. Specifically, the exploratory findings of this study have important implications for the treatment of PDD. Attachment insecurity appears to be at the heart of the process underlying the PDD and AIT and seems to respond positively and appropriately at this level.

To conclude we think we have succeeded in suggesting a promising brief therapy, in coherence with the attachment theory, which shows positive results in the treatment of PDD.

STATEMENTS

Acknowledgment

We would like to thank all the members and interns of our center for their assistance during the study.

STATEMENT OF ETHICS

All participants have given by writing their informed consent to participate in this study.

CONFLICT OF INTEREST STATEMENT

The authors have no conflicts of interest to declare.

FUNDING SOURCES

The authors received no financial support for the research

DATA AVAILABILITY STATEMENT

The authors confirm that data supporting findings of this study are available within the article.

REFERENCES

1. Kessler RC, Chiu WT, Demler O, Walters EE. Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. Arch Gen Psychiatry. 2005 ;62(6):617-27.
2. Klein JP, Steinlechner S, Sipos V, Schweiger U. Psychotherapie chronischer depression nach dem cognitive behavioral analysis system of psychotherapy (CBASP)-konzept. PPmP Psychother Psychosom Medizinische Psychologie. 2011;61(12):526-35.
3. Smit HF, Cuijpers P, Oostenbrink J, Batelaan NM, de Graaf R, Beekman AJ. Costs of nine common mental disorders: implications for curative and preventive psychiatry. J Ment Health Policy Econ. 2006; 9(4):193-200.
4. Wells KB, Burnam MA, Rogers W, Hays R, Camp P. The course of depression in adult outpatients: results from the Medical Outcomes Study. Arch Gen Psychiatry. 1992;49(10):788-94.
5. Greenberg PE, Birnbaum HG. The economic burden of depression in the US: Societal and patient perspectives. Expert Opinion on Pharmacotherapy. 2005;6(3):369-76.
6. Torpey DC, Klein DN. Chronic depression: Update on classification and treatment. Curr Psychiatry Rep. 2008;10(6):458-64.
7. Machmutow K, Meister R, Jansen A, Kriston L, Watzke B, Härter MC, et al. Comparative effectiveness of continuation and maintenance treatments for persistent depressive disorder in adults. Cochrane Database Syst Rev. 2019(5).
8. Epstein I, Szpindel I, Katzman MA. Pharmacological approaches to manage persistent symptoms of major depressive disorder: Rationale and therapeutic strategies. Psychiatry Res. 2014;220:S15-33.
9. McCullough J, Schramm E, Penberthy JK. CBASP as a distinctive treatment for persistent depressive disorder: Distinctive features.2014.
10. Keller MB, McCullough JP, Klein DN, Arnow B, Dunner DL, Gelenberg AJ, et al. A comparison of nefazodone, the cognitive behavioral-analysis system of psychotherapy, and their combination for the treatment of chronic depression. N Engl J Med. 2000;342(20):1462-70.
11. Schramm E, Klein DN, Elsaesser M, Furukawa TA, Domschke K. Review of dysthymia and persistent depressive disorder: history, correlates, and clinical implications. The Lancet Psychiatry. 2020 ;7(9):801-12.
12. Jobst A, Brakemeier EL, Buchheim A, Caspar F, Cuijpers P, Ebmeier KP,et al. European Psychiatric Association Guidance on psychotherapy in chronic depression across Europe. European Psychiatry. 2016 ;33(1):18-36.
13. Santiago NJ, Klein DN, Vivian D, Arnow BA, Blalock JA, Kocsis JH, et al. The therapeutic alliance and CBASP-specific skill acquisition in the treatment of chronic depression. Cogn Ther Res. 2005; 29(6):803-17.
14. Bowlby J (1969). Attachment. Attachment and loss: Vol. 1. Loss. New York: Basic Books.
15. Bowlby J. Attachment and loss: Vol. 2. Anxiety and anger.
16. Bowlby J. Attachment and loss: retrospect and prospect. Am J Orthopsychiatry. 1982;52(4):664.
17. Ainsworth M. L'attachement mère-enfant. Enfance. 1983;36(1):7-18.
18. Ainsworth MD, Blehar MC, Waters E, Wall SN. Patterns of attachment: A psychological study of the strange situation. 2015.
19. Main M, Solomon J. Discovery of an insecure-disorganized/disoriented attachment pattern.1986.
20. Herrera P, Mstibovskyi I, Roubal J, Brownell P. Proposition de méthodologie pour la recherche en Gestalt-thérapie: l'usage des études de cas dans l'analyse du processus de changement et son efficacité. Cahiers de Gestalt-therapie. 2018(1):55-74.
21. Bartholomew K, Horowitz LM. Attachment styles among young adults: a test of a four-category model. J Pers Soc Psychol. 1991;61(2):226.
22. Shaver PR, Mikulincer M. Adult attachment strategies and the regulation of emotion. Handbook of emotion regulation. 2007; 446:465.
23. Rholes WS, Simpson JA, Kohn JL, Wilson CL, Martin III AM, Tran S, et al. Attachment orientations and depression: A longitudinal study of new parents. J Pers Soc Psychol. 2011; 100(4):567.
24. Bowlby J. Violence in the family as a disorder of the attachment and caregiving systems. Am J Psychoanal.1984;44(1):9-27.
25. Bifulco AT, Brown GW, Harris TO. Childhood loss of parent, lack of adequate parental care and adult depression: a replication. J Affect Disord. 1987; 12(2), 115-128.

26. Conradi HJ, de Jonge P. Recurrent depression and the role of adult attachment: A prospective and a retrospective study. J Affect Disord.2009;116(1-2):93-9.

27. West M, George C. Attachment and dysthymia: The contributions of preoccupied attachment and agency of self to depression in women. Attach Hum Dev. 2002; 4(3):278-93.

28. Mikulincer M, Orbach I. Attachment styles and repressive defensiveness: The accessibility and architecture of affective memories. J Pers Soc Psychol.1995 ;68(5):917.

29. Shaver PR, Mikulincer M. Attachment-related psychodynamics. Attach Hum Dev. 2002 ;4(2):133-61.

30. Main M. De l'attachement à la psychopathologie. Enfance. 1998;51(3):13-27.

31. Widiger TA, Costa PT, American Psychological Association, editors. Personality disorders and the five-factor model of personality. Washington, DC: American Psychological Association; 2013.

32. Herrera P, Mstibovskyi I, Roubal J, Brownell P. Proposition de méthodologie pour la recherche en Gestalt-thérapie: l'usage des études de cas dans l'analyse du processus de changement et son efficacité. Cahiers de Gestalt-therapie. 2018(1):55-74.

33. Sheehan DV, Lecrubier Y, Sheehan KH, Amorim P, Janavs J, Weiller E, et al. The Mini-International Neuropsychiatric Interview (MINI): the development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10. J Clin Psychiatry. 1998; 59(20):22-33.

34. Dozier M, Lee SW. Discrepancies between self-and other-report of psychiatric symptomatology: Effects of dismissing attachment strategies. Dev Psychopathol.1995;7(1):217-26.

35. Bourque P, Beaudette D. Étude psychometrique du questionnaire de dépression de Beck auprès d'un échantillon d'étudiants universitaires francophones. Can J Behav Sci. /Revue canadienne des sciences du comportement. 1982;14(3):211.

36. Griffin DW, Bartholomew K. Models of the self and other: Fundamental dimensions underlying measures of adult attachment. J Pers Soc Psychol.1994 ;67(3):430.

37. Guédeney N, Fermanian J, Bifulco A. La version française du Relationship Scales Questionnaire de Bartholomew (RSQ, Questionnaire des échelles de relation): étude de validation du construit. L'encéphale. 2010;36(1):69-76.

38. Sarason IG, Levine HM, Basham RB, Sarason BR. Assessing social support: The social support questionnaire. J Pers Soc Psychol. 1983 ;44(1):127.

39. First MB, Gibbon M, Spitzer RL, Williams JB, Benjamin LS. Structured clinical interview for DSM-IV Axis II personality disorders (SCID-II) American Psychiatric Press. Washington, DC. 1997;1997.

40. Borckardt JJ, Nash MR, Murphy MD, Moore M, Shaw D, O'Neil P. Clinical practice as natural laboratory for psychotherapy research: a guide to case-based time-series analysis. American psychologist. 2008 ;63(2):77.

41. Parsonson BS, Baer DM. The visual analysis of data, and current research into the stimuli controlling it. Single-Case Research Design and Analysis (Psychology Revivals). 2015: 27-52.

42. Furukawa TA, Efthimiou O, Weitz ES, Cipriani A, Keller MB, Kocsis JH, et al. Cognitive-behavioral analysis system of psychotherapy, drug, or their combination for persistent depressive disorder: personalizing the treatment choice using individual participant data network metaregression. Psychother Psychosom. 2018;87(3):140-53.

43. Bruchon-Schweitzer M, Rascle N, Cousson-Gélie F, Bidan-Fortier C, Sifakis Y, Constant A. Le questionnaire de soutien social de Sarason (SSQ6). Une adaptation française. Psychologie française. 2003;48(3):41-53.

44. Frank E, Prien RF, Jarrett RB, Keller MB, Kupfer DJ, Lavori PW, et al. Conceptualization and rationale for consensus definitions of terms in major depressive disorder: remission, recovery, relapse, and recurrence. Arch Gen Psychiatry. 1991;48(9):851-5.

45. Dozier M. Attachment organization and treatment use for adults with serious psychopathological disorders. Dev Psychopathol.1990;2(1):47-60.

46. Slade A. Two therapies: Attachment organization and the clinical process. In Attachment issues in psychopathology and intervention 2003; 189-214. Routledge.

47. Tulving E. Organization of memory: quo vadis?.1995; 839-47.

48. Priel B, Shamai D. Attachment style and perceived social support: Effects on affect regulation. Pers. Individ. Differ. 1995 ;19(2):235-41.

49. Collins KA, Westra HA, Dozois DJ, Burns DD. Gaps in accessing treatment for anxiety and depression: challenges for the delivery of care. Clin Psychol Rev. 2004;24(5):583-616.

50. Ognibene TC, Collins NL. Adult attachment styles, perceived social support and coping strategies. J Soc Pers Relatsh. 1998;15(3):323-45.

51. Fournier S, Terradas MM, Guillemette R. Traumas relationnels précoces, représentations d'attachement et mentalisation chez l'enfant: mise à jour des connaissances et application au contexte de protection de la jeunesse. La psychiatrie de l'enfant. 2019;62(2):431-51.

52. McCULLOUGH JP. Psychotherapy for dysthymia: A naturalistic study of ten patients. J Nerv Ment Dis. 1991.

53. Murphy JA, Byrne GJ. Prevalence and correlates of the proposed DSM-5 diagnosis of chronic depressive disorder. J Affect Disord.2012; 139(2):172-80.