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# **Phenomenological contribution to understanding of vocally disruptive behaviour: A clinical case study in a patient with dementia.**

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**Keywords:** attachment, separation, personality, behavioural inhibition, depression, behavioural and psychological symptoms of dementia, vocally disruptive behaviour, phenomenology, melancholic type.

## **Abstract:**

Background: BPSD\* cause great suffering in patients and their families. Phenomenology can help clarify the diagnosis and propose some new therapeutic responses using Daseinsanalyse. Separation issues understood using the phenomenological description of the melancholic type (MT) by Tellenbach may further shed light on our understanding of depression in dementia.

Subject and Methods: In a 90-year old woman presenting with advanced (CDR 3) mixed dementia and BPSD in the form of vocally disruptive behaviour we discuss separation anxiety as the etiopathogenic hypothesis.

Depression and BPSD were assessed using the NPI\*, Cornell scale and MADRS\* in order to confirm our second phenomenological diagnostic hypothesis, i.e. melancholy. The Big Five inventory scale filled in by a proxy was also used to evaluate the patient's premorbid personality. We then propose an explanatory frame of VDB and depression through the standard phenomenological assessment of its relation to time, space, self and other.

Results: Confirming MT, we found an inhibited temperament and low openness to experience in the patient, as well as a symbiotic relationship with a close relative (the other).

Conclusion: Separation anxiety may well explain the patient's MT expressed by VDB. MT and her symbiotic relationship led to a situation unbearable to the patient and her close relative unable to delegate care to a specialized team.

## **1. Introduction**

Phenomenology studies the experiences of the Subject, their intentionality and existential modalities. According to its founders, Husserl and Heidegger, Phenomenology allows a return to things themselves and, thus, to the Subject and their « Being in the World », in order to highlight what appears ("phainomenon") – or not - in the foreground [1].

We propose to understand VDB, a form of BPSD\*, within the frame of a phenomenological diagnosis considering each subject as unique. A complete clinical examination is necessary to optimize individualized treatment [2]. Conceptually, we refer to the phenomenologists Tatossian and Heidegger [1,3,4,5]. This article focuses on the hypothesis that the phenomenologically defined melancholy type (MT) [10,11,12,13,14,15] may be concomitant and causative to VDB in some patients [6,7,8,9]. Indeed, we propose to study a patient with MT to clarify the personal meaning of VDB\*, highlighting personal risk factors in a particular case of VDB in dementia.

The clinical features in our case presentation, i.e. VDB that correspond to a form of BPSD, are likely to be underpinned by the neurobiological changes (here leucoaraiosis and cortical atrophy). Similarly, the patient's personal history of depressive disorders suggests further biological particularities (e.g. amygdala reactivity).

However, specific aspects of BPSD, VDB and their type, may be more accurately understood in phenomenological terms as being related to the patient's life history, evoking the possibly of reviving separation anxiety embedding in his family constellation and relationship.

## **2. Clinical case description and methods**

Current history:

Mrs R., a 90-year old woman, was admitted in retirement nursing home, three weeks before we first met her, due to repeated falls and treatment refusal at home. She had been shouting repetitively days in days out, sometimes also in the presence of her family. She had significant

weight loss and was clearly demented with no signs evoking a delirium. Insomnia is severe characterized by fragmented sleep, awakenings every 2 to 3 hours, early waking at 5am indicating a major disruption of the circadian rhythm. Agitation and aggressiveness were important, particularly in specific care situations including showering, taking treatment or when involved in activities with others. The medical exam suggested the patient was in pain due to a vertebral fracture. She was known to have diabetes as well as chronic headaches and migraine.

The patient's VDB prompted the intervention of our geriatric psychiatry out-reach team. When we first saw the patient, she had moderately advanced mixed dementia confirmed by a previous complete neuropsychiatric assessment (Mini Mental State Examination (MMSE) <10, CDR 3, MRI showing cortical atrophy and leucoaraiosis).

However, she was able to recognize caregivers and our team after repeated visits. Her shouts and screams expressed complaints and requests such as « I want to go home », « pity », « pity, my God », or « I want to go to Mom's ». VDB and agitation were somewhat fluctuating as she was calmer e.g. in the presence of her son or during mid-morning. At times, Mrs R. appeared to be delusional: « you want to poison me » (during meals or when given her treatment). No hallucinations were noted. Her only son intervened repeatedly in the care checking constantly on his mother's care and medication.

The clinical assessment included the NPI to explore BPSD. Depression was evaluated using both the MADRS and Cornell scales. A comprehensive interview was carried out with the family to better understand the patient's life history including relevant life events since her childhood. Furthermore, premorbid personality traits were evaluated through a proxy interview using the Big Five model. Finally, using Daseinsanalyse, we tried to establish a phenomenological understanding of depression exploring issues related to attachment and separation.

Based on our initial assessment we tentatively retained a hypothesis of moderately advanced mixed dementia, concomitant Major Depressive Disorder with possible melancholy given her continuous complaints and plaintive requests, important weight loss, severe insomnia and agitation, and feeling of guilt. We further retained major separation anxiety and MT phenomenologically defined with behavioural inhibition as a temperamental characteristic according to our clinical observations.

A calm single room was given to Mrs R and treatment with trazodone (25 mg three times per day) and haloperidol (0.5 mg oral solution and once in case of agitation). Individualized activities (music therapy, physiotherapy, walking in the garden with a familiar caregiver) were also prescribed and carried out. Melatonin was used at bedtime (3mg, then 5mg). Analgesic treatment (paracetamol with caffeine) was given in collaboration with the general practitioner. This treatment was her usual effective treatment for headache.

### **3. Results**

#### **3.1. Life history: the patient's vulnerabilities and resources**

Mrs R was of Latin origins, having grown up and lived in the south of France. Previously, she had already suffered from depression requiring antidepressant therapy. Panic and generalized anxiety disorders were comorbid.

Her son witnessed marital violence. After her divorce, following her son, she moved to Switzerland thirty years ago. More recently, she had been living with her son in the same apartment for 2 years. However, care had become very difficult as she refused treatment and was aggressive with caregivers at home. Cognitive performance had further declined with praxis deficits becoming more pervasive.

During World War II, she was part of the Resistance in France. After war, she became a nurse. According to her family, she had always shown exceedingly high moral conscience both for work and her personal life.

Indeed, she was exaggeratedly demanding with herself. She was described as having no good social quality of life. She did not remarry and allowed herself few leisurely hours, apart from holidays in France with her family. However, she liked cooking and gardening. She used to play cards with longstanding friends although she had become lonely in recent years.

Shyness, inhibition including behavioral inhibition and avoidance of novelty were part of her personality traits. She had a family history of depression and anxiety as her mother suffered from these syndromes.

### **3.2 Vocal Disruptive Behaviour (VDB) and Major Depressive Disorder (MDD) of Melancholy type**

Besides VDB as described qualitatively above, the patient was at times agitated and had delusional symptoms.

Furthermore, she had major depressed features as expressed by a MADRS score of 48. Indeed, a history of depressive disorder is likely to increase the risk of major depressive disorder during dementia. [2] Moreover, there are rather robust associations between dementia and depressive or bipolar disorders.

Figure 1 shows the evolution of the scores on the MADRS and Cornell scale that reflect a rapid improvement after starting the patient on antidepressants and adjuvant therapy.

[Insert Figure 1]

We note the end of the patient's moral suffering, her sadness, and insomnia. Similarly, VDB stopped after about two weeks of treatment as did her agitation and aggressiveness. The patient remains in remission after more than three months with the antidepressant therapy over this period of time.

### **3.3. Personality and BF Inventory**

The phenomenological approach aims at a better understanding of mental states such as depression through a more comprehensive assessment of underlying personality and vulnerability traits. This analyses in our patients points to her having premorbid MT personality defined by the following characteristics based on the Kasahara scale [16] i) work proneness, ii) thorough accomplishment of any task undertaken, iii) a strong sense of responsibility, iv) avoidance of conflict and confrontation. Further traits suggestion MT personality according to Kronmüller et al. [15,17] included dependence on her relatives, perfectionism, intolerance of ambiguity, hypernomy defined as a subject's wish to be perfect in particular as to one's social role according to social and religious or cultural norms.

Furthermore, we found features suggesting 'behavioural inhibition' (considering that there is no validated scale for adults) including social inhibition, neuroticism, low novelty seeking, inhibition to the unfamiliar, among others. However, personality assessment using BF inventory (French version) showed higher neuroticism, agreeableness and consciousness levels although these results not significantly different as compared to the general population. However, our patient had low openness to experience which was more than 2 standard deviations below general population-based z scores [18,19] (See Figure 2 and Tables 1 and 2).

[Insert Figure 2]

[Insert Table 1]

[Insert Table 2]

### **3.4 Phenomenology**

The qualitative phenomenological approach aimed at defining the patient's possible disorders of self-awareness that may be expected in the case of moderately advanced dementia. Thus, we concluded that the patient had a likely alteration of her pre-reflexive consciousness with an at least partial loss of her self while she maintained awareness without the self manifested by her sensitivity to the environment. At that, there was a change of the imagining and conceptual consciousness supposedly secondary due to her cognitive impairment. These qualitative elements have been noted repeatedly at each interview suggesting that her ability to elaborate and to develop a coherent string of thoughts and reasoning was permanently affected.

Thus, we hypothesize that the patient's alienation from herself may be a major factor determining her anxiety ultimately leading to depression. However, separation anxiety appeared to be a major problem in this particular case as demonstrated repeatedly after each departure by her son since the patient's admission to nursing home. The phenomenology of separation [20] and, complementarily, attachment in depression [21] may be used to explain the Subject, her Melancholy and the Melancholic Type (see below).

#### **4. Discussion**

##### **4.1 Possible meanings of VDB in dementia with MT depression**

Few articles [6,7,8,9] studied VDB in dementia emphasizing a lack of understanding and knowledge in this field.

Although possible meanings are reviewed precisely, accurate diagnosis and rigorous scientific follow-up are usually lacking.

Diagnosing an underlying pathology concomitant to dementia in patients with VDB is difficult [6,7,8,9].

However, atypical depression may be masked by VDB and other behavioural disorders. Specialized care teams propose to evaluate VDB [8] looking for possible causes such as organic pain, psychosis, depression, or specific environmental factors or unmet needs which can trigger shouting. In fact, using an etiological investigation, they propose to search for a direct organic, psychological, or environmental cause prompting a number of psychological and environmental interventions [2].

The many etiopathogenic pathways potentially leading to VDB or other BPSD hamper the establishment of standardized interventions. Nevertheless, in clinical settings, VDB are frequent and experience suggests that similar clinical profiles occur repeatedly. Thus, it is our impression that the demented patient with VDB and underlying MT reported here may not be a rare occasion. Indeed, we have reported three similar clinical cases [23].

As mentioned, diagnosing depression, both MT and other types, in patients with moderately advanced or advanced dementia is difficult. Thus, the NPI did not allow the detection of depression as the healthcare team did not judge the patient to be depressed. Consequently, the use of more extensive psychopathological assessment possibly including scales targeting specifically depression, such as the MADRS or the Cornell scale to evaluate depression [22] in dementia, may be more appropriate. However, the diagnosis of MT may be to some point hypothetical until targeted treatment leads to significant clinical improvement. Thus, in our cases, focussing our treatment effort on treating MT and separation anxiety was effective. Therefore, considering VDB in dementia as a manifestation of underlying MT may be a reasonable therapeutic option in many cases. The presence of a history of depression as well as migraine and headache [24, 25] may argue in favour of this interpretation. Marital violence in the past may be an associated feature, but this needs further investigation.

Post-Traumatic Stress Disorder, even during infancy, may be a risk factor for dementia [26,27]. The inhibited temperament (BI), as in our patient, is a vulnerability factor for anxiety disorders [28,29,30,31,32,33] similar to the intolerance of uncertainty [34]. VDB may be related to an underlying premorbid psychiatric disorder [7]. Of course, further, in particular prospective studies are needed to evaluate this temperament in older age and to confirm whether or not it is part of MT. However, specific longstanding personality traits may be associated with VDB in dementia. Thus, we found low openness to experience in our patient. This is to some extent different from the association between high scores of neuroticism or consciousness and depression that has frequently been reported, including in patients with chronic headache [35,36]. However, low openness to experience was correlated with the serotonin transporter promoter variant 5-HTTLPR (short allele) in depressed patients suffering from headache [35,36]. Specific serotonin transporter polymorphism may be associated with higher amygdala reactivity that is also found in behavioural inhibition [28,37]. In addition, MT may be linked to a weak openness to experience and low novelty seeking that may be related to significant levels of social anxiety found in MT as well as separation anxiety and insecure attachment.

However, low openness to experience predicted worse outcome, so worse quality of life in the elderly [38].

#### **4.2 Trajectory from BI/MT to adulthood into the elderly: a theoretical synthesis from a clinical case**

Analyzing our patient's life trajectory to better understand MT, we suggest some risk factors which may codetermine a stable melancholic endogeneous type (see Figure 3). They comprise shyness, social anxiety, social inhibition to unfamiliar situations, and excessive moral consciousness that seem to be a stable trait from childhood to adulthood. Indeed, we know the melancholic type is assessed through the Kasahara scale that also evaluates social anxiety disorders. We propose a new view, through the eye of geriatric psychiatry, i.e. the melancholic type might stem from behavioral inhibition (BI) in childhood (References 28, 29). Indeed, BI is also a risk factor for social phobia, as well as depression or melancholy. Some characteristics studying through both Kasahara's scale and the Big Five Inventory (BI children and adult present shyness, excessive consciousness, and the following sentences (Kahasara scale) also relate to the BI presenting with social anxiety:

- I am rather timid
- I have a strong sense of responsibility
- I cannot say no when someone asks me to do something
- I give importance to my social duty
- I am nervous about what people think of me

This is the case here, but our clinical observation needs confirmation in the future.

Indeed, we must be aware of methodological limitations when interpreting these findings (cf. below).

[Insert Figure 3]

#### **4.3 Unbearable situation and separation phenomenology**

Our exploration suggests that several levels of consciousness or self-awareness are likely to be altered in our patient. To some extent it may be acceptable to say that she is "unable to be" in the sense of high-level self-awareness, as it was already explained in phenomenology studies [1,20,46,47]. Here we have to say it is just a clinical investigation using Phenomenology knowledge without any standardized scientific scale. She cannot be otherwise, but the intentionality of the subject exists through VDB. This is what Plagnol describes as the "untenable situation" [39]. The subject suffers and any position in the world is untenable, whereas it is impossible not to be present. In this frame of thought, psychiatric, in particular psychotic symptoms are explained by the loss of "fundamental trust" experienced by the patient.

We suggest that separation and attachment phenomena need to be studied to better understand VDB. In fact, separation and attachment may be understood as two asymmetric dimensions. Imagining and conceptual consciousness (according to phenomenology studies [1,20,46,47]) are involved in each separation process that may, each time, experienced as a definitive separation or loss, and the experience of the death itself [40].

Otherwise, the Subject presents a melancholic type which can be explained through biological endogeneous type with a separation issue from the family, probably since childhood, involving the mother-infant separations and attachment process (indeed, we know that insecure and ambiguous attachment were learning during childhood, involving the mother-child relationship).

Separation is a reflection of a mode of attachment or the story of the bond between at least two persons. It begins with the main attachment figure, usually one's mother. Attachment style may be implicated in agitation in BPSD [41,42] though little or nothing is known for sure on this issue. For example, exhaustion of relatives may influence agitation reactions and BPSD [43], as well as separation issues. Indeed, the subject's attachment ("Being at World") is a dynamic co-constitution with the 'other' (between two subjects) that must allow individuation, but may

generate a symbiotic relationship as found here in the melancholic type. Consequently, the situation encountered in our case study may suggest the presence of an unbearable situation for the 'other' according to Plagnol and Pringuey [1,39]. The son is unable to delegate care to a specialized team as he experiences this as an abandonment of his mother. The 'subject' cannot accept the 'other's' suffering (the mother) as this would imply destroying the 'other' which would backlash at the 'subject' and destroy them as an ethical subject.

Moreover, time appears to slow down after separation and during the depression [1,44,45] and this extension of time causes great suffering for both the patient and their relatives. Moreover, the subjectivity is lost [1,44], while time slows down [1,20], explaining a Subject without Subjectivity lead to melancholy [1,44].

Given these multiple and intricate relationships it appears as almost evident that VDB, or other BPSD, cannot be connected in a straightforward way with the neurobiological underpinnings and the cerebral lesions of dementing disorders. We have tried to show here that, for certain patients, the phenomenological understanding may help explain or better understand some symptoms and signs such as VDB and BPSD that frequently occur in dementia [46,47].

### Limitations

The phenomenological approach is not quantitative science and aims at daseinsanalytical descriptions of a single person's way of being in the world. Thus, we have not been able to systematically underlie our approach with validated scales. Thus, there is no validated scale to analyze behavioural inhibition in the elderly and a retrospective clinical life-history interview is the only way to reconstruct behavioural inhibition. This is, however, inherent even to quantitative explorations in retrospective studies. Of course, the Big Five scale is limited to explore the personality and temperament, retrospectively.

In accordance with the qualitative research paradigm, our single case study is not so much designed to test specific hypotheses, but to create and discuss new hypotheses in a much underexplored area of old-age psychiatry.

### **5 Conclusion and Perspectives**

We discuss a particular clinical case, regularly found in clinical practice. A patient suffering from mixed dementia with VDB is discussed within the realm of the phenomenologically define MT of depression. We suggest that MT may be related to low openness to experiences, separation anxiety and insecure attachment.

Thus, longstanding personality traits including also behavioural inhibition may be risk factors or premorbid determinants increasing vulnerability to MT that itself triggers VDB and possibly other BPSD. In short, it may be crucial to take into account a patient's particular life trajectory to better understand BPSD in an individual patient

and implement treatment interventions [48] considering the patient in their social immediate and extended environment [49,50] (see Figure 4).

Although we can't use phenomenology in dementia to describe every features of it or to treat these diseases, we can use Daseinanalyse to highlight some psychological problems often seen in dementia, such as attachment features in order to take into account the relative's suffering, trying to understand their ways of Being in the World and to better understand life's trajectories in geriatric populations. This is what we have tried to do in the case of our manuscript is the case in our manuscript.

[Insert Figure 4]

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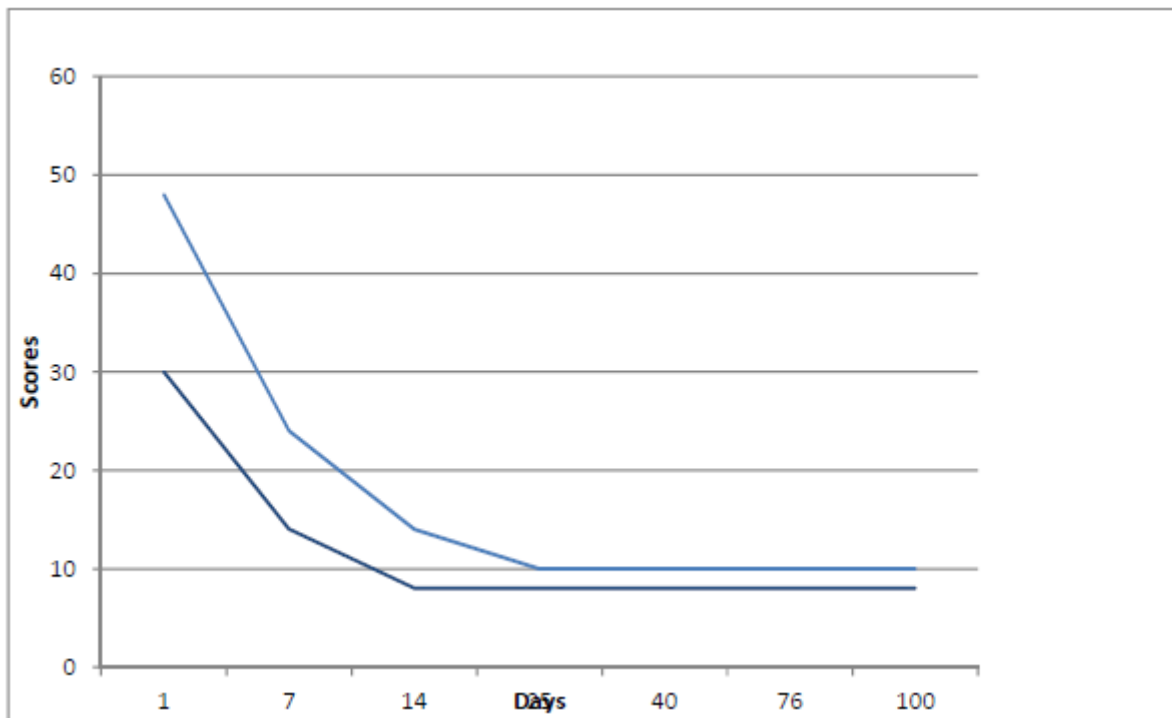
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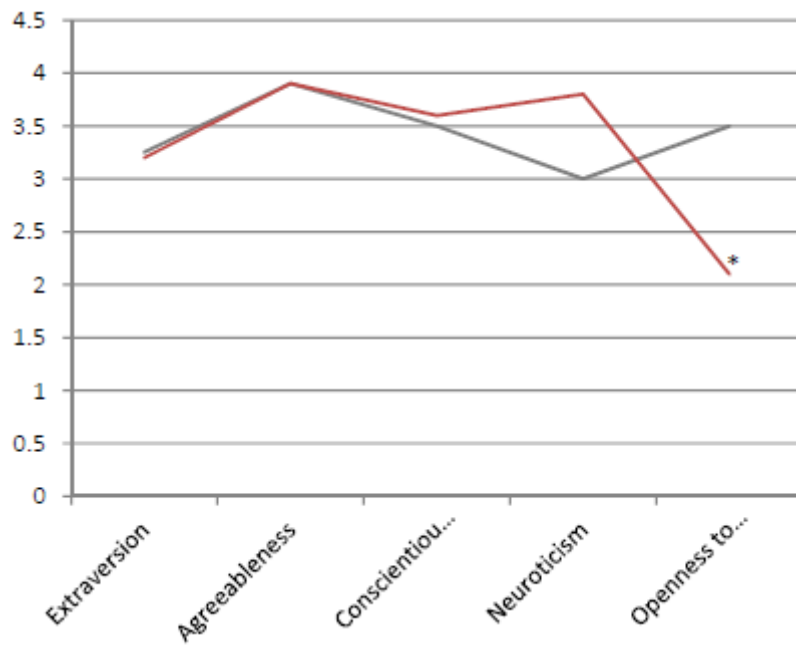
## Annexes



*Black line :* Cornell Scale

*Blue line :* MADRS

**Figure 1. Evolution of Major Depressive Episode / MADRS Scale / Cornell Scale**



Grey line : general population

Red line : patient

**Figure 2. Big Five Inventory (BFI interviewing relatives). Patient compared to general population on the Big Five dimensions**

**Table 1. The patient : scores found on the Brief Personality Inventory (BFI)- hetero-evaluation by the family**

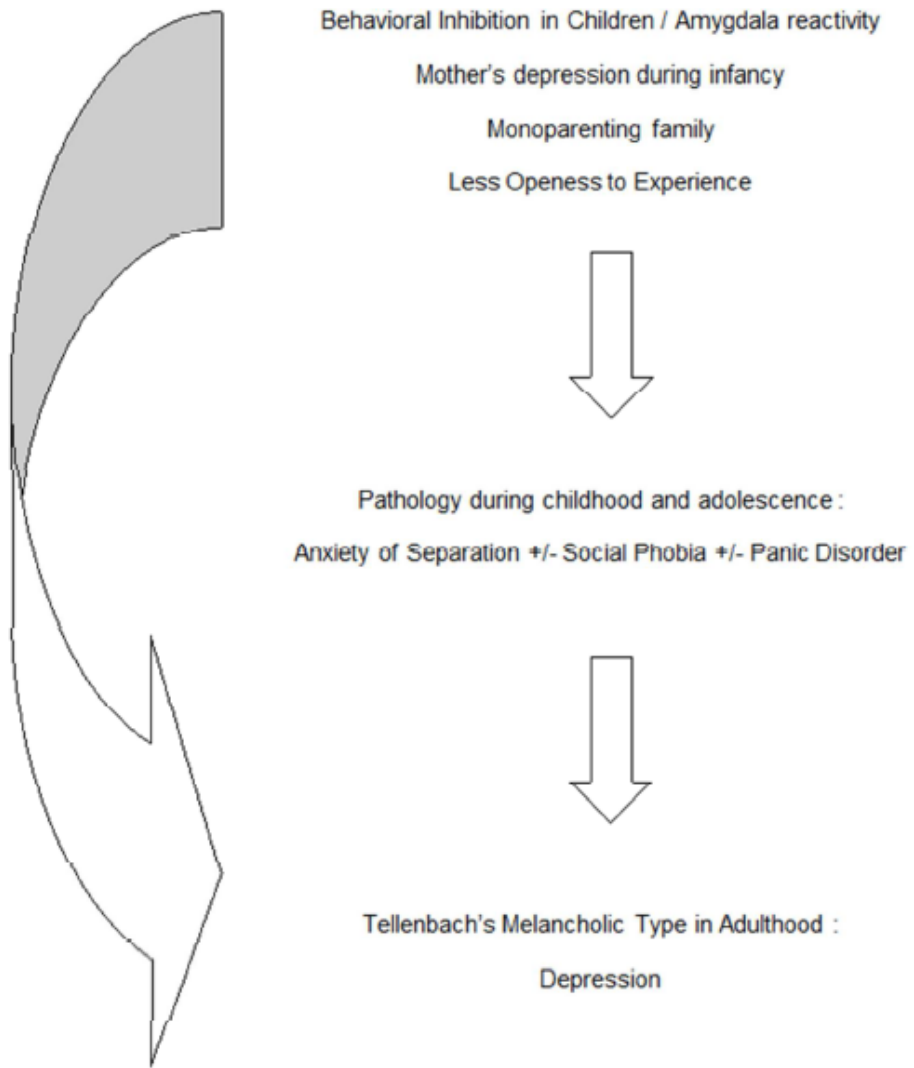
Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness
3,25	3,90	3,55	3,75	2,1 (*)

(\*) z score < 2 SD

**Table 2. General population : scores found on the big five personality inventory (BFI)-heteroevaluation (according to Plaisant et al. 2008)**

Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness
3,2 (0,8)	3,90 (0,6)	3,4 (0,7)	3,0 (0,8)	3,5 (0,6)

**Figure 3. The Melancholic Type from Childhood to Adulthood into Older Age**



**Figure 4. Integrated perspective: clinical symptoms investigation in BPSD and VDB**

