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# Borderline functioning and life trauma: a structural approach

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## Summary

**Aim:** The general aim of this multiannual research project was the exploration of the links between traumatizing life events and current functioning.

**Material and methods:** The research project was based on a sequential design. It included an exploratory study with 206 persons experiencing exclusion and marginalization, followed by a confirmatory study with 195 persons. We present the confirmatory study results, as well as a meta-analysis of both studies. Both studies were based on an integrated quantitative and qualitative research methodology, combining a semi-structured biographical interview, psychometric scales (Hospital Anxiety and Depression Scale (HADS), Index of Well-Being) and a projective test (Rotter Incomplete Sentences Blank). We developed original rating scales for the semi-structured interview and the answers to the Rotter test, allowing a step from qualitative analysis to inferential and multidimensional statistics.

**Results:** With the help of appropriate multidimensional statistical procedures applied to the semi-structured interview (linear principal components analysis) and the Rotter test (multiple correspondence analysis), we were able to draw out differential types of personality functioning based on the prevalent defense mechanisms and coping strategies, linked either to a succession of traumatic events, such as neglect, maltreatment and multiple losses occurring since childhood, or to recent catastrophes. The comparative study of the answers to the Rotter test in the first and third person pointed to differences in the expression of conscious and unconscious needs. Configural frequency analysis applied to HADS identified specific types that could correspond to variants of borderline functioning. The meta-analysis of the exploratory and confirmatory findings showed convergent results at several fundamental dimensions. Our results supported the traumatogenic hypothesis of borderline functioning and pointed towards a partial overlapping of the concepts of splitting and dissociation.

**Conclusions:** More long-term evaluation studies of appropriate psychotherapeutic measures are needed. From the methodological point of view, the most appropriate strategy might be a mixed-methods design combining data from different sources (semi-structured interviews, psychometric scales, projective tests, etc.) and respecting the person-centered approach. This approach combines objectivity with subjectivity in an optimal manner.

**life traumas/borderline functioning/complex post-traumatic states/meta-analysis/sequential research design**

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We present some data of a confirmatory study belonging to a multi-annual research project. The overall research results were described in internal research reports. The aim of the study was to highlight the links between traumatizing life events occurring since childhood and current structural organization of personality, with dif-

ferent subgroups of people suffering from exclusion and marginalization (people living in precarious circumstances, homeless people, long-term unemployed people, refugees and asylum seekers, drug addicts, prisoners or people just released from prison). Original research tools were developed in the context of this project. An exploratory study was followed by a confirmatory study with independent samples.

During the last stage of the research project ( (presented in the internal research report) psychotherapeutic art sessions were offered to the marginalized people. The outcome was evaluated in a prospective follow-up study and the therapeutic process was investigated with the aim of uncovering some indicators of a possible resumption of the subjectivation) process.

## CONCEPTUAL SPECIFICATIONS

### Borderline functioning

The categorical or descriptive psychopathology (DSM–5, ICD–10) indicates diagnostic criteria for distinct personality disorders and lists borderline personality disorder among the pathological cluster B personalities, beside narcissistic personality disorder, antisocial personality disorder and histrionic personality disorder; however, structural psychopathology, which follows the psychodynamic perspective, uses the broader concepts of borderline functioning or borderline personality organization [1–4]. The latter is illustrated by Bergeret [1] in France, Dulz & Schneider [2] in Germany and by the tradition of self psychology in the United States [3,4]. Bergeret [1]proposes three basic personality structures: the neurotic structure, the borderline structure and the psychotic structure. Each is characterized by specific features linked to the dominant psychic instance, the nature of the fundamental conflict, the origin of anxiety, the main defense mechanisms and the type of object relations (Table 1). Dulz & Schneider [2] argue for the transitory character of surface symptoms (e.g. eating disorders, conduct disorders, addictions), whereas the same primary defense mechanism of splitting, accompanied by the adjuvant mechanisms of projective identification, primitive idealization, denial and omnipotence/devaluation, underlies the functioning of all cluster B pathological personalities of the DSM.

**Table 1.** The overview of structural organizations

| | Commanding psychic instance | Conflict | Nature of anxiety | Main defenses | Object relations |
|---|---|---|---|---|---|
| Neurotic structures | Superego | Superego with id | Castration | Repression | Genital |
| Psychotic structures | Id | Id with reality | Fragmentation | Denial of reality<br>Splitting of the self | Fusional |
| Borderline structures | Ego ideal | Ego ideal with:<br>– id<br>– reality | Loss of object | Splitting of objects<br>Forclusion | Anaclitic |

Based on Bergeret [43: p. 62].

The theories of Kernberg and Kohut help us to better understand the difference between pathological and mature narcissism. Kernberg [3] described the development of a compensating grandiose self in people suffering from a narcissistic wound and Kohut [4] looked at mature narcissism arising at adolescence.

Let us stress that the structural approach to psychopathology is compatible with the dimensional approach, allowing for continuity between normal and pathological states and behaviors [5].

### Post-traumatic functioning

Among the unadjusted responses to stress, clinicians typically distinguish between post-traumatic adaptation disorder with generalized anxiety (PTA), pathological grief, and post-

traumatic stress disorder (PTSD) with its triad of symptoms consisting of a revival of traumatic memories, increased general activation and a tendency to avoid everything related to the trauma. More recently, two post-traumatic syndromes have emerged: complex post-traumatic states [6] and post-traumatic embitterment disorder (PTED) [7]. Complex post-traumatic states (cPTSD) are characterized by an important component of dissociation. Dissociation can be an appropriate defense mechanism in a frightening situation, allowing psychological survival. However, if it becomes a habit, it can block any further evolution of the traumatized person [6].

Post-traumatic embitterment disorder has been described in the clinical literature fairly recently [7]. It was recognized that the classic definitions of PTSD and adaptation disorders do not cover all the post-traumatic manifestations encountered in clinical settings. Post-traumatic embitterment is often the consequence of a series of traumatizing events that are interpreted as humiliations and injustices and the person's fundamental beliefs. Therapeutic approaches are based on concepts of the "psychology of wisdom" that can act in the sphere of values.

## RESEARCH QUESTIONS

Among others, the following research questions came out of the research literature, as well as of the results of the exploratory stage of the study:

What kind of evidence is there for the traumatogenic hypothesis of borderline functioning?

According to this hypothesis, early repeated traumas could be an etiological factor in borderline functioning and even in psychotic breakdown [8–11]. Subsequently, specific vulnerability would be maintained and reinforced with unfavorable biographic events encountered later in the person's life. Borderline functioning would entail unadjusted behavior and dysfunctional coping strategies when faced with stressors and anxiety, so that a retroactive loop exists between the profound organization of personality and a reaction to external stressors.

To what degree can the hypothesis of an analogy or partial overlapping between borderline states and complex post-traumatic states, and the proximity between the defense mechanisms of dissociation and splitting, respectively, be supported?

Dissociative tendencies, characteristic of complex post-traumatic states [6,12], could be close to the defense mechanism of splitting [2]. Both originate in repeated early life trauma where the person can survive unbearable anxiety only by scotomizing a part of himself and reality. Later on, these survival strategies can become dysfunctional, impeding on the person's psychological evolution and maturation.

## METHOD

### Research design

We opted for a sequential research design: an exploratory study with *N*=206 people was followed by a confirmatory study with *N*=195 people, using the same research methodology. The aim of the confirmatory study consisted in testing the theoretical modelization that emerged from the exploratory results. The fourth stage of the study was related to the evaluation of appropriate psychotherapeutic measures.

We will present some data of the confirmatory study related to the two research questions.

### Research tools

The two cross-sectional studies used a semi-structured biographical interview, two psychometric scales (Hospital Anxiety and Depression Scale (HADS) [13] and the Index of Well-being [14]) and a semi-projective test – Rotter Incomplete Sentences Blank [15]. The answers to the Rotter test were interpreted with the help of an original rating scale, constructed in the phenomenological and structural tradition, allowing a move from qualitative analysis to quantification and the use of inferential and multidimensional statistical procedures [16]. A similar rating scale was also constructed for the analysis of the semi-structured biographical interview [17].

Considering the research literature (on borderline functioning and post-traumatic states, we selected the following theoretical dimensions for the relevant diagnostic categories to be included in the rating scales:

- pathological narcissism *v*. mature narcissism
- archaic aggressiveness *v*. adapted aggressiveness
- anaclitic objectal relationships *v*. autonomy
- essential depression *v*. stable identity
- maturity *v*. immaturity of moral instances
- richness *v*. poorness on the level of the formal and structural characteristics of speech

### Participants

Our sample is composed of 195 people aged 20 to 73 years (mean= 37.89; SD=11.01). All were encountered in shelters for people in precarious circumstances; the main sheltering institutions of the country participated in the study. The percentage of men (84.14%) and women (15.86%) in our sample is representative of the population in similar institutions. Data were collected by clinical and health psychologists (. Each participant had several individual interview and testing sessions lasting at least 4 hours.

As the study was conducted in a natural setting frequented only by people in a precarious living situation, there were no special exclusion criteria (self-recruitment on a voluntary basis). All the participants were autonomous adults who gave informed consent after the aims of the project had been explained to them. The research project received ethical approval and respected the criteria of the Declaration of Helsinki.

The collection of data, including those related to the evaluation of the psychotherapeutic sessions (not presented in this article) took 3 years.

## RESULTS

### Prevalence of life trauma

According to the results of the semi-structured biographical interview, the traumatic events that the participants endured since childhood (physical, psychological and/or sexual abuse, negligence, loss, exterior catastrophes, etc.) were largely superior to the epidemiological results presented in the literature for the general population [17, 28].

### Two profiles of functioning at the level of the semi-structured interview

During the exploratory analysis, and with the help of several multidimensional procedures, we identified two types of post-traumatic functioning underlying two distinct personality profiles: linked on the one hand to a single trauma experienced as an adult, and on the other hand, to repeated traumas experienced since childhood [17].

The confirmatory analysis produced similar findings. We present the results of factor analysis applied on the rating scale for the semi-structured interview. The extraction mode was a linear principal components analysis followed by varimax rotation with Kaiser normalization. After considering the scatter plot, we extracted two factors with a cumulative eigenvalue of 49.010 (Table 2).

**Table 2.** Factor analysis: biographical interview (*N*=195). Results of a varimax rotation: correlations between the variables and the latent dimensions (factors)

| Variable | Factor 1 | Factor 2 |
|---|---|---|
| Repeated ruptures | 0.748 | |
| Suffering in childhood | 0.742 | |
| Single rupture | –0.703 | |
| Entire family | –0.656 | |
| Suffering at adolescence | 0.646 | |
| Neglect | 0.612 | |
| External catastrophes | –0.538 | 0.443 |
| Single-parent family | 0.532 | |
| Violence | 0.503 | |
| Continuity of live course | –0.349 | 0.340 |
| Isolation | | –0.853 |
| Social support | | 0.830 |
| Family support | –0.319 | 0.556 |

The denomination of the factors (called latent dimensions) is based on the analysis of the distribution of the variables in a two-dimensional space, respectively on their correlations with the latent dimensions. The aim of factor analysis thus consists in creating meaning by showing a latent order behind the observable scattering of data.

Proposed denomination for the latent dimensions:

- dimension 1: repeated traumas since childhood/single trauma as an adult
- dimension 2: social integration/isolation.

Comparative structural analysis at the level of the Rotter test

In order to explore the latent structure of the Rotter test, we used a multiple correspondence analysis (MCA) [18] via the HOMALS procedure. This procedure belongs to non-linear multivariate analysis techniques (optimal scaling) and can handle categorical variables in small samples [19,20]. It does not rely on distributional assumptions and is fitted for an exploration and interpretation of the structure of data without providing information on the statistical properties of the solution. Its aim is similar to that of factor analysis: creating meaning by interpreting the latent order existing behind the observable distribution of variables.

Answers to the third- and first-person parts of the Rotter test (unconscious functioning and conscious functioning, respectively) were analyzed. We present the results of the analysis in three dimensions meeting the criterion of eigenvalue >1/*N* [21] (Table 3 & 4).

As was the case with factor analysis, the proposed denomination for latent dimensions is based on an analysis of the observed correlations:

Rotter third person

- dimension 1: pathology of the ego ideal and conflictual relationships with others
- dimension 2: desire to take life into one's own hands
- dimension 3: sideration and retreat.

Rotter first person

- dimension 1: hypertrophy of the ego ideal and conflictual relationships with others
- dimension 2: passivity and need for affiliation
- dimension 3: ambivalence regarding job placement.

Those denominations are meaningful in light of the research literature on borderline functioning and post-traumatic states.

**Table 3.** HOMALS: Rotter third person (*N*=195) correlations between the variables and latent dimensions

| Variable | Dimension 1 | Dimension 2 | Dimension 3 |
|---|---|---|---|
| Distress | 0.208 | | |
| Guilt | | 0.188 | |
| Resignation | | | 0.459 |
| Hatred | 0.687 | | |
| Pessimism | | | 0.355 |
| Hypertrophy of ego ideal | 0.606 | | |
| Underdevelopment of ego ideal | 0.196 | | 0.249 |
| Professional aims | | 0.208 | |
| Aims of love | | 0.247 | |
| Conflicts with friends | 0.575 | | |
| Isolation | | | 0.179 |

**Table 4.** HOMALS: Rotter first person (*N*=195) correlations between the variables and latent dimensions

| Variable | Dimension 1 | Dimension 2 | Dimension 3 |
|---|---|---|---|
| Distress | 0.207 | | |
| Guilt | | 0.439 | |
| Resignation | | 0.170 | |
| Hatred | 0.597 | | |
| Regret of the past | | 0.246 | |
| Nostalgia | | 0.370 | |
| Hypertrophy of ego ideal | 0.584 | | |
| Underdevelopment of ego ideal | | | 0.281 |
| Professional aims | | | 0.323 |
| Family-related aims | | 0.350 | . |
| Conflicts with friends | 0.509 | | |
| Conflicts at work | | | 0.307 |

Exploration of the dissociative experiences

At the level of HADS

We analysed the co-occurrence of different degrees of anxiety and depression during the exploratory study by means of configural frequency analysis (CFA) [22]. Types 2 3 (medium anxiety and high depression) and 3 2 (high anxiety and medium depression) occurred with a frequency that is higher than the theoretical expectation. A similar configuration appeared during the confirmatory study (internal research report)

With regard to the clinical interpretation, types 2 3 and 3 2 could correspond to variants of borderline functioning. According to structural psychopathology, this condition is characterized by splitting and scotomization [1,2,23], resulting in incapacity to perceive anxiety or depression at a conscious level. From this angle, type 3 2 could correspond to adaptation disorder, with generalized anxiety [24], while type 2 3 could correspond to PTED [7]. These hypothetical interpretations have to be tested in an in-depth clinical study.

### At the level of the Rotter test

Comparing the third-person answers (unconscious functioning) and the first-person answers (conscious functioning) allows for investigating dissociative tendencies. It was undertaken at the level of clinical subgroups of refugees [25] and of homeless and long-term unemployed people [26]. Statistical analyses showed that affective needs, longing and the feeling of vulnerability are expressed in the third person, whereas feelings of guilt, hatred and the description of conflictual relationships are expressed in the first person (on the conscious level). We saw similar effects of, respectively, splitting and dissociation, in the exploratory study [17].

### Meta-analysis

The meta-analysis of both the exploratory and confirmatory findings showed convergent results on the following points:

- prevalence of early traumatic events
- prevalence of borderline functioning
- frequency of ego ideal pathology (hypertrophy or underdevelopment)
- splitting or dissociation between the expression of negative feelings, such as hatred and envy, and the expression of affective needs, like longing for love and nostalgia
- extraction of two basic personality profiles linked to the presence of repeated traumas since childhood *v.* a recent exterior catastrophe such as war, political persecution, natural catastrophes, disturbing a continuous life course
- the presence of an enlarged family functioning as a protective factor against vulnerability to stress and trauma

## SYNTHESIS

### Support for the traumatogenic hypothesis of borderline functioning

We recall the fact that, according to the current traumatogenic hypothesis, repeated child trauma could be an etiological factor in borderline functioning [10], causing a specific vulnerability to traumatic events occurring later in life and resulting in dysfunctional coping strategies to external stressors. This hypothesis is supported by our exploratory and confirmatory study in people facing exclusion, namely the overrepresentation of discontinuity of the life course, repeated disruptions, child neglect and abuse, suffering during childhood and adolescence. These factors are particularly prominent in people experiencing homelessness or drug addiction. The effect of external catastrophes and of suffering as an adult is seen more often in refugees [17,25,26].

The current clinical literature discusses even the possibility of regression of "normal" functioning towards borderline functioning under the influence of serious trauma as an adult. This hypothesis is contrary to the traditional psychodynamic view, which maintained that normal (or, in psychoanalysis, "neurotic") functioning is a stable structure.

### Proximity between the concepts of splitting and dissociation

In both the exploratory and confirmatory studies, our results support the hypothesis of proximity between the concepts of splitting and dissociation.

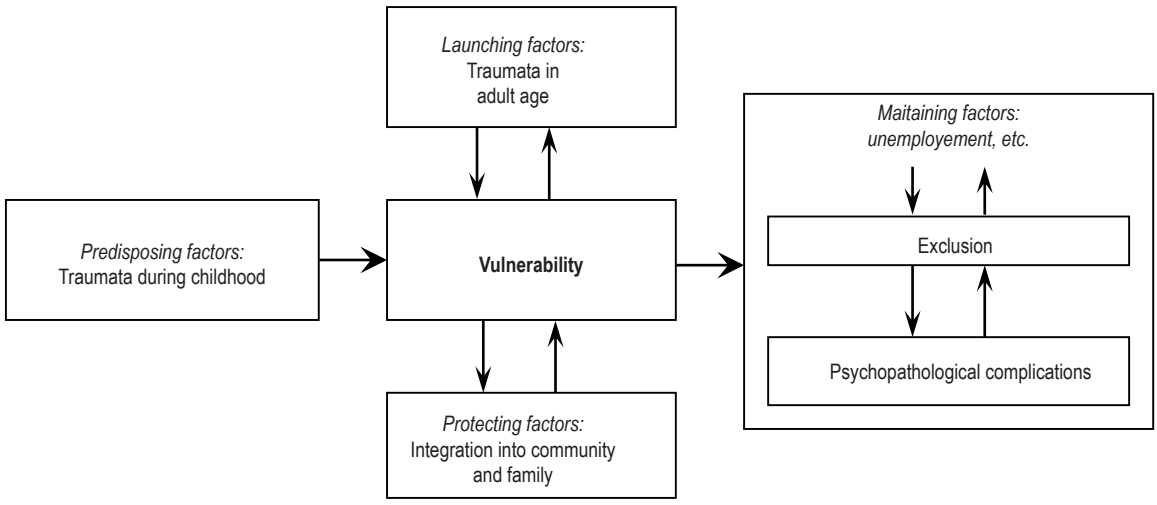
The links between the indicators of borderline functioning in the clinical interview and in the projective test on the one hand, and the adverse life events, anxiety and depression, and well-being on the other hand, generally meet our expectations. However, we have to consider that answers to a self-referring questionnaire are largely determined by the conscious vision of the self and/or by the vision that one wants to mislead others with. They do not necessarily reflect the person's intimate reality. The outcome of this is that the persons predisposed to scotomization and splitting, two main defense mechanisms of borderline functioning [2,27], can only express a partial view of them. Thus, their answers to psychometric questionnaires correspond with a state of emotional elation if they tend towards the grandiose pole described by Kohut [4]. In this case, they could be predisposed to overestimate their well-being and underestimate their level of depression. In such people, self-reported questionnaires must be treated with caution.

Hence the importance of combining the psychometric approach with the projective and expressive approach, which allows the person better access to the split tendencies of their personality and to their hidden needs and resources.

Confirmation of a prior theoretical modelization and significance of findings

The results of the confirmatory study support the theoretical modelization (Fig. 1) of the exploratory stage of the research project [28].

**Figure 1.** Theoretical modelization of the links between biographic traumatic events and exclusion and marginalisation at adult age




According to [28]

Our results support the recent changes in the DSM concerning post-traumatic psychiatric syndromes. They are congruent with other findings showing links between different kinds of traumatic life events and borderline personality disorder [29,30], particularly with early disturbances of object relations and attachment [31–33]. They support arguments for a redefinition of the criteria of borderline functioning in terms of dimensional psychopathology [5,34]. However, the categorical definition of borderline personality disorder retains its specificity regarding complex PTSD [35] or bipolar disorder [36].

Let us stress that the question of reversibility of borderline functioning and of complex post-traumatic states has not yet been answered convincingly. There is little indication in research literature concerning this very important topic. Clinical generalizations are based on case studies. To address this question, we need long-term prospective follow-up studies based on the evaluation of therapeutic interventions. Limitations to any kind of therapeutic measures proposed to people experiencing repeated, severe psychological trauma are the potentially irreversible effects of long-term stress in the hippocampal area of the brain [37] as well as the damage caused by long-term misuse of alcohol and illegal drugs [38–40].

## CONCLUSION

The expression of suffering and distress as well as vulnerability to subsequent psychopathological complications (suicidal behavior, drug addiction, hetero-aggressive violence, chronic psychosis) is so pronounced in our population that it necessitates the implementation of long-term restructuring psychotherapeutic measures [41,42]. Our main assumption underlying psychotherapeutic treatment in traumatized people is focused on violence: it is only by integration of personal violence, deeply repressed feelings of hatred, jealousy and guilt, and by understanding it as part of normal human functioning, linking one's individual destiny with the existential situation of mankind, that the self, broken by traumatic experiences, may be gradually restored and that the sound personal violence described by Bergeret [43] can emerge.

As regards methodology, our research project documents the interest of adopting a mixed-methods design, combing semi-structured interviews with data from psychometric and projective tests, as well as a person-centered approach, focused on collecting a great number of variables per person instead of recruiting a great number of persons per variable [44]. This strategy combines objectivity and subjectivity in an optimal manner and seems most appropriate to actioning research in natural surroundings, and especially to the evaluation of psychotherapies.

Let us finally stress that a research project based partially on non-parametric statistical procedures does not aim at statistical generalization but it can pave the way for future research.

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