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Adjustment disorders with and without embitterment

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SUMMARY

Objective

Adjustment disorders have been greatly revised in the 11th version of the ICD. The definition of adjustment disorders as stress-related disorders is in accordance with many years of research on embitterment and posttraumatic embitterment disorder. The question is how often adjustment disorders are accompanied by embitterment and/or PTED and what the differences are between pure adjustment disorders (A), embittered adjustment disorders (E) and PTED (PTED).

Methods

A total of 186 rehabilitation patients with adjustment disorder symptomatology were classified according to their embitterment symptomatology and examined for differences in terms of sociodemographic data, depressiveness, life stresses, embitterment, wisdom, and general symptomatology.

Results

PTED was found in 8.1% and feelings of embitterment in 35.5% of patients with adjustment disorder.

Pure adjustment disorder patients reported lower levels of depression (BDI-II: A:10.13 vs E:19.93; PTED:20.58), adjustment disorder symptomatology (ADNM-8: A:24.7 vs E:32.2; PTED:32.7), and higher levels of wisdom (MDW-30: A:81.0 vs E:69.4; PTED:72.6). Patients with embittered adjustment disorders and PTED did not differ significantly in terms of impairment.

Conclusions

The data show that adjustment disorder with embitterment and adjustment disorder without embitterment and PTED can and should be distinguished as they come along with different impairment severity and symptomatology profiles. Diagnostic criteria for PTED are rather strict, which helps to avoid overdiagnosis.

Key words: embitterment, posttraumatic embitterment disorder, psychosomatics, psychotherapy, trauma

Clinical impact statement

It is relevant to differentiate between adjustment disorder with and without the emotion embitterment. Both share the same disorder. However, it is important whether the patient also developed embitterment as both come with different impairment levels and symptoms. To search for embitterment is highly relevant as it occurs in almost every second patient with adjustment disorder. These patients need proper attention. The current diagnostic criteria for Posttraumatic Embitterment Disorder (PTED) are strict to avoid overdiagnosis in daily practice.

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Introduction

The definition of adjustment disorders has been substantially changed in the ICD-11 [1]. Core characteristics are "preoccupation with the stressors" and "failure to adapt". These symptoms have to manifest itself in less than 3 months after the patient was exposed to the stressor. Further symptoms are recurring distressing thoughts, constant worrying or rumination about the stressor, general stress-response symptoms, depressive or anxiety symptoms, social, interpersonal, occupational, educational problems, or impulsive 'externalizing' symptoms, particularly increased tobacco, alcohol, or other substance use [2-6]. The *"Adjustment Disorder - New Module 8; ADNM-8"* [5] is a scale specifically designed to assess the adjustment disorders according to the ICD-11.

The description of adjustment disorders (6B43) in the ICD-11 gives examples for typical psychosocial stressors such as "divorce, illness or disability, socio-economic problems, conflicts at home or work". These are social stressors, which often entail injustice, humiliation, and breach of trust. A typical reaction to these psychological processes is embitterment, which is also listed in association with adjustment disorders in the online version of the ICD-11 [1].

Most people know embitterment from themselves and others [7,8]. Embitterment is seen in reaction to injustice, humiliation, and breach of trust, associated with helplessness [9-12]. Similar to anxiety, embitterment can be observed in several forms [13]. Normal embitterment may occur in the context of an acute dispute which is accompanied by derogative comments, but subsides a short while afterwards. Embitterment can also prevail stimulus bound for years, re-emerging whenever the critical event is mentioned, while these people are otherwise calm and unimpaired. There may also be "embitterment prone personalities", individuals which tend to easily respond with embitterment whenever they are criticized or questioned. Additionally, there are other personality disorders like narcissistic or paranoid personalities which can be accompanied by embitterment. Comparable to anxiety and post-traumatic stress disorder, embitterment can, with greater intensity and duration, also become a disabling disorder of itself. This has been described under the term "Posttraumatic Embitterment Disorder, PTED" [7,14,15]. Triggering is a single negative life event which is experienced as derogative, insulting, and downgrading. Apart from embitterment, additional symptoms are a dysphoric-aggressive-depressive mood, phobic avoidance of persons and places related to the event, an impairment in daily activities, feelings of aggression and revenge, and even suicidal tendencies and sometimes extended suicide.

This raises the question how often adjustment disorders are accompanied by feelings of embitterment or even PTED. The objective of the present study was to investigate the association between adjustment disorders and embitterment and the differences between pure adjustment disorders, embittered adjustment disorders, and PTED.

Methods

Patients and setting

Participants were inpatients from a psychosomatic hospital and were suffering from various mental disorders. Routine treatment included medical and pharmaceutical treatment, single and group psychotherapy, occupational therapy, sport therapy, and social work care. Length of stay was about five weeks, as predetermined by health insurance, but could be changed according to individual needs.

Assessments

All patients were seen for clinical reasons by a senior psychosomatic specialist. He also made a judgement on language problems or other special clinical features, which may hinder participation in this study.

The following measures were assessed in the patients in the beginning (pre) and in the end (post) of their rehabilitation treatment:

- ADNM-8: all patients admitted to the hospital were routinely screened with the "Adjustment Disorder - New Module 8; ADNM-8" [5], which asks for adjustment disorder criteria in reference to the ICD-11 [1]. The introduction reads: "Which life events stick in your mind and are most burdensome?", followed by the items "1. I have to think about the stressful situation repeatedly"; "2. I have to think about the stressful situation a lot and this is a great burden to me"; "3. Since the stressful situation, I find it difficult to concentrate on certain things"; "4. I constantly get memories of the stressful situation and can't do anything to stop them"; "5. My thoughts often revolve around anything related to the stressful situation"; "6. Since the stressful situation, I do not like going to work or carrying out the necessary tasks in everyday life"; "7. Since the stressful situation, I can no longer sleep properly"; "8. Overall, the stressful situation affected me strongly in my personal relationships, my leisure activities, or other important areas of life". Items are answered on a Likert scale (1 = never to 4 = often). Patients with an ADNM-8 total score ≥ 18 are suspect of adjustment disorder and were suitable for the present study.
- SCL-90: the "Symptom Checklist" ("SCL-90-R") was used to record physical and especially psychological symptoms. The impairment of the last seven days is inquired. The "SCL-GSI" gives an indication of the

extent of impairment in general [16] and can be seen as a measure of subjective distress.

- BDI: the "Beck Depression Inventory" ("BDI-II") was used to assess depressive symptoms. A total of 21 statements about different possible depressive symptoms have to be selected on a four-point scale (0 3). The total score is an indication of the extent of current depressive symptomatology with a suspicious threshold of 13 [17].
- DLB scale: the "Differential Life Burden Scale" ("DLB Scale") was used to record subjective stress in a variety of life domains. The scale starts with the words: "When I think about...", connected with different areas of life such as "family", "work", or "the future". Each area of life can be rated on a six-point scale (0 = "very negative", 1 = "negative", 2 = "somewhat negative", 3 = "somewhat positive", 4 = "positive", 5 = "very positive"). The total score provides information about the extent of general stress in life [18]. Items with a rating of 0 = "very negative" or 1 = "negative" indicate that this life area is burdensome for the patient;
- The "Multidimensional Wisdom Scale" ("MDW") is a questionnaire for evaluating a person's wisdom level. This can be seen as resilience factor in coping with difficult problems in life [19]. Wisdom-related items must be answered on a five-point scale ranging from "not true" – "definitely true" [20].
- PTED interview: the "PTED interview" [21] is a standardized diagnostic interview conducted by a specially trained psychotherapist. The interviewer has to make a judgement whether patients suffered from a critical negative life event which they experience as unjust and unfair, whether they show a distinct feeling of embitterment related to the triggering event and which is not due to some other mental disorder, whether the patient feels helpless towards what happened, whether there are intrusive and distressing memories, whether the overall subjective well-being is impaired since the critical event, and whether the problem exists for longer than six months.
- Embitterment: at the end of the ADNM-8 questionnaire, two additional questions were added: "Thinking about what happened, I have the desire for revenge" and "Thinking about what happened, I feel disparagement, injustice, and embitterment". These items represent embitterment. Their combined score ranges from 2 to 8.
- Sociodemographic data: data such as age, gender, and education were recorded.
- Group allocation: all patients had to have a minimal score of ≥ 18 on the ADNM-8 scale, indicating adjustment disorder problems. These patients were divided into three groups. The first group included all patients who were diagnosed as suffering from PTED according to the standardized interview (PTED-group). Next, patients with a score of 5 to 8 on the embitterment items were allocated to the embittered group (E-group). The remaining patients who were neither diagnosed as PTED nor had an increased embitterment score were grouped as pure adjustment disorders (A-group).

Ethics

The study was supported by a research grant of the Federal Pension Fund Berlin-Brandenburg (10-R-40.07.05.07.018). Patients gave their informed consent for participation in the study. The data have been processed anonymously. The study was approved by the ethical committee of the Charité University Medicine Berlin (AS57(bB)/2019), registered with and approved by the Clinical Trial office and the data security office of the Charité University Medicine Berlin, the clinical trial data security department of the Federal Pension Fund Berlin-Brandenburg, and was registered with the German Trial Register (DRKS00016895).

Results

A total of 186 patients were included in the study. There were 15 patients (8.1%) with adjustment problems who also fulfilled the diagnostic criteria for PTED (PTED-group), 66 patients (35.5%) with adjustment problems who also reported feelings of embitterment and revenge but did not fulfil PTED criteria (E-group), and 105 patients (56.5%) with adjustment problems according to the ADNM ≥ 18, but no signs for embitterment (A-group).

There were no significant differences between the three groups in regard to age (53.39 years, range 29-65, SD = 7.87; F = .339; p = .713), gender (74.2% female; χ^2 = 1.01; p = .603), marital status (55.4% married; χ^2 = 4.222; p = .647), educational level (33.3% college; χ^2 = 0.616; p = .735), ability to work at admission (56.5% fit for work; χ^2 = 2.646; p = .266), duration of incapacity (41.0% longer than six months; χ^2 = 7.142; p = .521), and ability to work at discharge (55.9% fir for work; χ^2 = 7.135; p = .129).

Table I shows the differences between groups in the standardized diagnostic interview. The differentiation between PTED-patients on one side and E- and A-patients on the other side is the judgement of the interviewer on the presence of an embitterment affect. All patients in all three groups complained about some negative life event, as this was the inclusion criterion according to the ADNM-8. All PTED- and 85% of E-patients called this an experience of injustice and unfairness in comparison to 64% in A-group. PTED- and E-patients also expressed significantly more about feelings of de-

TABLE I. *PTED interview.*

Item	PTED n = 15	Embittered n = 66	Pure adjustment n = 105	χ^2-Test
Suffered a critical life event	100%	100”	100”	
Observer rating: embitterment affect	86.7”	7.6”	1.9”	98.75; p = **< .001**
Subjectively perceived as unjust or unfair	100”	84.8”	63.8%	15.04; p = **< .001**
Subjective complaints about despair and anger	100%	97”	81.9”	11.26; p = **.004**
Feeling helpless towards the critical life event or perpetrator	93.3”	95.5”	77.1”	11.52; p = **.003**
Intrusive memories	100%	90.9%	93.3%	1.59; p = .451
Agitated when remembering event?	80%	63.6%	52.4%	5.20; p = .074
Minimum 4 additional symptoms?	100”	86.4”	75.2”	7.07; p = **.029**
Current general mood depressed?	100”	90.9”	87.6”	2.34; p = .311
Normal mood prevails when distracted?	86.7”	92.4”	89.5”	0.64; p = .726
Additional mental and emotional problems in the past	26.7”	45.5”	26.7”	6.76; p = **.034**
Current condition can be explained by previous or other mental disorder? (A4a)	6.7”	25.8”	14.3”	5.03; p = .081
Duration of mental impairment to date > 6 months?	100%	92.4%	97.1%	2.93; p = .232

spair and anger, helplessness towards the critical event and the perpetrator. The E-group showed more cases with additional mental problem in the past, which were also more often seen as cause of the present problems. All groups, but most pronounced in the PTED-group, reported a high degree of intrusive memories and agitation when reminded of the event. The PTED- and the E-group showed more symptoms in general. There was in all groups a generally impaired mood state, but not an impairment in mood modulation, as this would be characteristic for depressive disorders. The duration of illness was longer than half a year in almost all cases, including the A-group, which contradicts the diagnostic requirement of the ICD-11, which sees adjustment disorders as transient disorders which should subside in half a year.

The ADNM-8 total score is across all patients at admission 27.8 (SD = 3.44), and 28.6 (SD = 3.76) in the PTED group, 28.45 (SD = 3.01) in the E-group, and 27.28 (SD = 3.59) in the A-group, speaking for a trend of a lower score in the A-group as compared to both embitterment groups (F = 2.78; p = .06). At discharge the overall score is 23.9 (SD = 5.3), and 26.6 (SD = 4.4) in the PTED group, 26.8 (SD = 2.8) in the E-group, 21.7 (SD = 5.3) in the A-group, indicating a significantly lower score in the A-group as compared to both embitterment groups (F = 25.7; p = < .001). Figure 1 shows the percentage of patients which report on the ADNM-8 scale, that they “often” suffer from respective problems. The comparison of the three groups shows that all patients report about repeated negative thoughts also in the ADNM-8, that both embitterment groups find these more burdensome, and that especially the PTED-group is more impaired as indicated by problems in concentration, the fulfilment of daily tasks, or sleep disorders.

Table II gives an overview on general symptoms and the present well-being of patients in the three groups. Significant differences were found for the symptom checklist (GSI) pre and post, and the BDI pre and post. Post-hoc tests show that these differences are preferably due to differences between the E- and A-group at pre-test, but also between the A- and PTED-group at post-test, with no differences between the two embitterment groups.

The wisdom score, as a measure of resilience, does not show any group differences at pre assessment but a significantly higher score in the A-group as compared to the embitterment groups at post assessment.

When looking at eliciting life burdens, as measured with the DLB scale, significant differences are found between groups with highest scores in the A-group, lowest in the E-group, and the PTEDgroup in between (Tab. II). This suggests that E-patients complain most about burdens across different areas in life. The same is found at the post assessment.

Figure 2 shows the percentage of patients with a rating of 0 or 1 (negative and very negative) for each DLB item by group. Across all areas, the A-group shows lower numbers of burdening. The E-group shows relatively higher scores in relation to family at large and future and lifetime balance. PTED- and E-patients show increased rates predominantly in regard to work, health,

TABLE II. *Differences in subjective complaints between groups. Means (standard deviation) are reported.*

Item	All	PTED	Embittered	Pure adjustment	Group differences	PTED - E	PTED - A	E - A
SCL GSI (pre)	1.12 (.58)	1.24 (.42)	1.38 (.62)	0.94 (.50)	F = 13.211; p = **.000**	P = .650	P = .155	P = **.000**
SCL GSI (post)	0.76 (.58)	0.96 (.57)	1.09 (.65)	0.53 (.40)	F = 24.058; p = **.000**	P = .688	P = **.014**	P = **.000**
BDI total (pre)	24.53 (10.60)	25.67 (8.76)	28.47 (11.27)	21.92 (9.67)	F = 8.366; p = **.000**	P = .632	P = .415	P = **.000**
BDI total (post)	14.62 (11.34)	19.93 (11.44)	20.58 (11.98)	10.13 (8.64)	F = 23.4; p = **.000**	P = .975	P = **.003**	P = **.000**
MDW (pre)	54.9 (8.33)	52.64 (11.07)	54.25 (9.20)	55.67 (7.20)	F = 1.059; p = .349	P = .812	P = .453	P = .609
MDW (post)	57.53 (8.82)	51.69 (11.13)	54.66 (7.3)	60.17 (8.50)	F = 11.618; p = **.000**	P = .508	P = **.003**	P = **.000**
DLB (pre)	46.96 (12.02)	47.500 (10.12)	40.25 (13.01)	51.21 (9.50)	F = 17.694; p = **.000**	P = .088	P = .500	P = **.000**
DLB (post)	52.65 (12.22)	52.29 (8.416)	45.37 (12.76)	57.43 (9.9)	F = 21.154; p = **.000**	P = .108	P = .264	P = **.000**

and politics and PTED-patients especially in regard to colleagues and politics.

Discussion

Embitterment is a reactive emotion which may manifest in different forms [13], ranging from transitory emotional surges, which reside in a short amount of time on one side, to PTED on the other side, a distinct disorder with great impairment, severe suffering for the affected person, and also burdens for the environment. In between there are people who feel that they have been treated unfairly and unjustly and harbor feelings of aggression and revenge towards the perpetrator, but do not fulfil the criteria for a PTED diagnosis. Finally, there are people who suffer from past burdens in their lives, but do not experience feelings of embitterment. Embitterment can be conceived similar to anxiety, which is also a reactive, normal and universal emotion. Both emotions can cause disabling mental disorders, depending on their intensity, duration, or context. A clinical and scientific problem for both is, to discriminate between the different manifestations of these emotions. This is especially of interest in the differentiation between adjustment disorders with emitterment (similar to adjustment disorders with anxiety) on one hand, and PTED as special embitterment disorder (similar to PTSD as specific anxiety disorder) on the other hand. While there is a large amount of research in regard to anxiety, there is a lack of data in regard to embitterment. To our knowledge, this is the very first study which looks at embitterment in patients with adjustment disorders, trying to delineate those which suffer from PTED.

The very first and important result is that among patients suspicious of adjustment disorder, only 8.1% were classified as PTED cases. Nevertheless, 35.5% more patients reported thoughts of embitterment and revenge, which together accounts for almost every second patient. Embitterment therefore is a highly prevalent emotion in patients with adjustment problems and should therefore get proper clinical and scientific attention [15,22,23].

The second result is that feelings of embitterment do not equal PTED in all cases. This suggests that a distinction should be made. Again, this is similar to anxiety. The majority of people with anxiety do not fulfil criteria for PTSD [24].

Similarly, adjustment problems and feeling burdened is not the same as feeling downgraded and humiliated. Not every person who is burdened by negative life events is also harbouring feelings of embitterment. Even people who are complaining about experiences of injustice or unfairness do not necessarily harbour feelings of embitterment and desires for revenge.

There are no differences in regard to sociodemographic data like age, gender family status or education. This suggests that embitterment cannot be explained by structural factors and obviously can affect everybody [14,25].

Differences are that E-patients are suffering the most and are particularly impaired in general, as reflected in regard to burdensome thoughts, concentration, restric-

tion of daily activities, the ADNM-8 sum score and the symptom load as measured with the SCL-90, the BDI, and the DLB sum score. As embitterment is regularly associated with negative mood and multiple other unspecific psychosomatic symptoms, one might expect that the E- and the PTED group similarly suffer from such additional symptoms. Contrary to this assumption our data suggest the the E-patients suffer more in this regard than PTED-patients. An explanation may be that the E- and PTED-group both felt to be the victim of disparagement, injustice, and embitterment and were harbouring the desire for revenge. But this negative emotion was qualified as "embitterment" in the very sense only in the PTED-group. The E-patients seem more generally to be at odds with the world, which can explain their increased general suffering. It is also a warning notice that self-ratings are not enough to diagnose PTED, which is also known from self-ratings in other areas [26].

When looking at the types of burdensome life events, as reflected in the DLB scale, E-patients show the highest scores in partnership, sex, children, parents, the future, and life balance as compared to the other groups. Together with PTED-patients, they also show high scores in regard to work, health, and environment. In summary, this also gives the impression that E patients are dissatisfied, reproachful, and overburdened in regard to life in general. PTEDpatients report problems with colleagues, work, and politics, suggesting a more focussed type of eliciting event. A-patients show the lowest scores across all domains.

In regard to resilience, no significant differences are seen in the pre-assessment, while in the post-assessment, PTED- and E-patients have significantly lower scores than A-patients. This suggests and confirms that embitterment is a negative prognostic factor and can impair therapeutic developments [7,27,28].

Conclusions

In summary, the data show that reports about feelings of embitterment coincide with a greater overall severity of the present disorder. Therefore, it is reasonable to distinguish cases with embitterment from those without. In spite of the prevasiveness and destructiveness of embitterment, this emotion is often overlooked and not taken properly into account.

In spite of their differenc, one may also discuss, whether the similarities between PTED and embittered patients in contrast to A-patients would not rather suggest that the diagnostic criteria for PTED are too restrictive and both types of patients should get the same clinical diagnosis. This is not only a problem of differential diagnosis but also of sensitivity and specificity. The present diagnostic criteria have been designed in order to avoid overdiagnosis. More sound epidemiological data are needed in order to answer this problem. Until then, it may be reasonable to stay with the present diagnostic classes of PTED, adjustment disorder with embitterment, and adjustment disorder without embitterment. Linden & Arnold [29] have suggested that unspecific feelings of being at odds with the world, including subjective feelings of embitterment and desires of revenge, should best be coded in ICD-11 under "adjustment disorders (6B43)" [1], while PTED should be considered as "specified disorder specifically associated with stress" (ICD-11 6B4Y).

Limitation

The study has been done in a convenience sample of psychosomatic inpatients. The results may be different in other groups. There were no standardized diagnostic interviews available, which might have added important information on the full illness spectrum.

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Conflict of interest statement

The Authors declare no conflict of interest.

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Author contributions

ML: is the principal investigator who designed the study, guided the data analyses and prepared the manuscript; CA: is a study scientist, who did the data analyses and helped to write the paper; BL: is the director of the Heinrich-Heine-hospital and supervised the conduct of the study; MR: is the director of the Department of Psychosomatic Medicine at the Charité and principal applicant of the research grant; BM: collaborated in the analyses, interpretation and writing up of the data.

Ethical consideration

The Authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committees on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008. APA ethical standards were obeyed.

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