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Abstract: Adjustment disorders (Ajds) are common yet under-researched psychiatric disorders. The present classifications fail to provide specific diagnostic criteria and relegate them to subsyndromal status. They also fail to provide guidance on distinguishing them from normal adaptive reactions to stress or from recognised psychiatric disorders such as depressive disorder or post traumatic stress disorder. These gaps run the risk of pathologising normal emotional reactions to stressful events on the one hand and on the other of over-diagnosing depressive disorder with the consequent prescription of antidepressant treatments that are unnecessary. Few of the structured interview schedules used in epidemiological studies incorporate AjD. They are generally regarded as mild notwithstanding their prominence as a diagnosis in those dying by suicide and their poor prognosis when diagnosed in adolescents. There are very few intervention studies.

Key words: Adjustment disorder. Subsyndrome. Classification. Overlap. Prevalence.

Adjustment disorder: the state of the art

Adjustment disorder (AjD) began life in DSM-111 in 1980¹ and some 10 years later in ICD-9² when the term was introduced. Prior to that it was called transient situational disturbance. The DSM-IV and ICD-10 descriptions of AjD are broadly similar and where there are differences they will be highlighted in this paper. The main features are that the symptoms arise :

- ✚ In response to a stressful event,
- ✚ The onset of symptoms is within 3 months of exposure to the stressor and DSM and 1 month in ICD
- ✚ The symptoms must be clinically significant in that
 - They are distressing and in excess of what would be expected by exposure to the stressor
- Or
- There is significant impairment in social or occupational functioning (this is mandatory in ICD – CHECK))
- ✚ The symptoms are not due to another axis 1 disorder (or bereavement in DSM)
- ✚ When once the stressor or its consequences is removed the symptoms resolve within 6 months.
- ✚ Symptoms may be acute or chronic in DSM-IV (<6 months or >= 6 months) or in ICD brief or prolonged (< 1 month or <2 years)

AjDs are divided into subgroups based on the dominant symptoms of anxiety, depression or behaviour (see below).

Since its inception it has been the subject of criticism on three fronts. The first was that it constituted an attempt to medicalise problems of living and did not conform to the criteria for traditional disorders such as having a specific symptom profile or psychobiology³. The second was that it was a “wastebasket diagnosis” which was assigned to those who failed to meet the criteria for other disorders⁴. The third was on its diagnostic instability⁵ and that its main utility was to serve as a “justification” for diagnosis-based reimbursement operating in the healthcare system of the US. Despite this it has been retained in the further classifications, in large measure due to its clinical utility (See below).

In DSM-1 AjD was one of only two categories of childhood psychiatric disorders to be included, the other being childhood schizophrenia “adjustment reaction” and “transient situational disturbance”. These were the most common diagnoses in child and adolescent psychiatric practice in the early 1960’s⁶.

Why is AjD important? – clinical utility

AjD has cofounded the critics and continue to be diagnosed in the range of research and clinical setting, including the general population, in-patient treatment units and so on.

Consultation liaison psychiatry: This is the setting in which the diagnosis of AD is most likely to be made. Around 12% of referrals are so diagnosed in university hospitals in the US⁷, a figure that resembles that in European hospitals.⁸ Nevertheless, the frequency with which AD is now diagnosed seems to be declining in tandem with an increase in the diagnosis of major depression⁹, possibly due to the availability of psychotropic drugs, especially the SSRI's, that are safer in those who are medically ill than the older agents. This may not so much reflect a change in the prevalence of AjD as a change in the "culture of prescribing" stimulating changes to the "culture of diagnosis"¹⁰.

Among specific medical groups, AD was almost three times as common as major depression (13.7 versus 5.1%) in acutely ill medical in-patients¹¹ and are diagnosed in up to one third of cancer patients experiencing a recurrence¹². In obstetric/gynaecology consultation-liaison,¹³ adjustment disorders predominated over other mood disorders.

Among those assessed in the emergency department following self harm, a clinical diagnosis of AjD was made in 31.8% of those interviewed while major depression was less common at 19.5%¹⁴.

The General population: None of the major international studies such as the ECA,¹⁵ the National Co-morbidity Survey¹⁶ or the National Psychiatric Morbidity Survey¹⁷ included AD among the conditions examined. An exception was the ODIN study of depressive disorders¹⁸ which found a prevalence of only 1% for AjD involving 5 European countries. A possible explanation was that mild depression, a term often erroneously viewed as synonymous with AjD, was included in the depressive episode category, inflating that category at the expense of AjD. By contrast a study of elderly people¹⁹ from the general population found the prevalence of AjD to be 2.3%, similar to that of major depression.

Primary Care: While reported to be very common in primary care epidemiological studies of AjD in this setting are noticeably absent and range from 1% to 18%^{20, 21} among consulters with mental health problems. However, these studies are old and further studies are overdue.

Psychiatric settings: A study²² of intake diagnoses into out-patient clinics, combining clinical evaluation and a structured interview using SCID, found that AjD was the most common clinical diagnosis, made in 36% of patients, as compared to just over 11% using SCID. Among psychiatric in-patients 9% of consecutive admissions to an acute public sector unit were diagnosed with AjD

Child and adolescent psychiatry: Quantifying the prevalence of AjD in child and adolescent populations is difficult due to changes in the diagnostic criteria over time²³. As in adult psychiatry, recent studies of prevalence have not incorporated AjD into the disorders to be examined. AjD in the younger age groups AjD has been shown to have a high prevalence but unlike adults, in this age group it carries with it significant morbidity and a poor outcome frequently developing in major psychiatric illness^{23, 24}. General population studies have found rates of 4.2% among 14-16 year old in Puerto Rico²⁵ while the total psychiatric morbidity was 17.8% - thus AjD

amounted to a significant proportion of the total. A similar rate was replicated in a children aged 8-9 in Finland ²⁶.

Among out-patients figures of 5.9-7% have been described ^{27, 28} while in child liaison psychiatry over one third of those with recent onset diabetes were so diagnosed ²⁹ – making it the most common psychiatric disorder to follow this well defined stressor. Long term adversity is also a significant contributor since the condition lasts longer among children whose parents also had mental health problems.

In clinical populations the numbers of suicidal young people with AD has varied between one fifth and a half and a recent study confirms these figures with over one third receiving a diagnosis of AjD, 25% of whom shared suicide attempts, suicidal threats . Suicidal patients were characterised by previous psychiatric treatment, poor psychosocial functioning at treatment entry, suicide as a stressor, dysphoric mood, and psychomotor restlessness ³⁰. Assessment of risk in adolescents diagnosed with AjD is crucial ³¹ since the suicidal process appears to be shorter and more rapidly evolving, without prior indications of emotional and behavioural problems, in comparison to other groups.

- cost and service planning

AjD is a recognised psychiatric disorder that resolves spontaneously with the passage of time or when the stressor or its consequences are removed. Thus the role of pharmacological interventions is much less than in most other psychiatric disorders. This has obvious cost implications for the health services.

Yet antidepressants are now the most commonly prescribed medications in the United States ³² with the proportion in the general population receiving them almost doubling from 5.84% in 1996 to 10.12% in 2005. In actual numbers this represents an increase from 13 million to 27 million persons. During this time the use of antidepressants for “depression”, anxiety and AjD increased significantly and those with AjD showed the biggest increase from a rate of 22.26/100 to 39.37/100 annually.

These findings raise several issues with respect to AjD. Since “depression” is the diagnosis most commonly associated with antidepressant usage the question remains as to whether this has really increased so dramatically over a seven year period. These concerns were voiced by others ³³ when results from the first wave- ECA and NCS studies were compared and revealed an increase in the prevalence of major depression from 4.2% to 10.1%. The authors speculated that many of those so diagnosed might be experiencing adaptive reactions that did not require any intervention as they may be time limited. A related concern is that the ubiquity of major depression arises from the expansion of the definition of depression due to the very low symptom threshold required to make this diagnosis. An unintended consequence might be the conflation of self-limiting conditions such as AjD with major depression ³⁴. Since these diagnoses have implications for specific treatment strategies the epidemiological foundation of service planning is likely to be rendered moot when wide variations in the prevalence of common mental disorders are reported. Thus, distinguishing

between AjD and major depression/depressive episode is more than an academic nicety since this has potential implications for resource allocation.

The study above ³² also highlights another issue – the rationale for the increasing prescription of antidepressants in AjD, for which there is no indication, nor any evidence of benefit. Similar findings were reported in those with medical illnesses ⁹ which identified decreasing use of the AjD diagnosis while major depression increased in tandem with greater recourse to antidepressants. Clearly the expansion of antidepressant usage into conditions such as AjD, for which there is no evidence of benefit highlights the imperative of clearly delineating this condition in our classifications so that it can be the subject of further study that will inform treatment.

Problems with the current classification of AjD

The current debate on AjD is focussed on how best to operationalise AjD in future classifications, ICD-11 and DSM-V, that are now being prepared so that the flaws evident in the present classifications can be overcome.

1. Theoretical underpinnings - are we comparing like with like?

A conceptual problem with the current classification of AjD is that its diagnosis is based on two parameters – the presence of a stressor that acts as a trigger and the judgement that it is self-limiting. It is closer to the definition of a discrete disorder as proposed by Kendell ³⁵ than most other disorders in psychiatry since its aetiology and course are encapsulated within the diagnosis. In this regard it differs from most other psychiatric disorders which are cross-sectional and based on symptoms alone. Yet the current classifications impose a hierarchical model that assumes equivalence in how AjD and other diagnoses are construed. But AjD is not comparable to other disorders since they are based on different constructs.

2. Should AjD remain a sub-threshold diagnosis?

As currently classified AjD is a subthreshold diagnosis that is trumped once the symptom threshold for another diagnosis is met. There is an inherent belief that a subthreshold diagnosis is less severe than a full-blown disorder such as major depression, the diagnosis by which AjD is most often superseded. Yet the evidence for this is lacking and there is empirical data ³⁶ that when measures of symptom severity or social functioning are examined there is no difference between those with mood disorders and AjD.

With regard to suicidal behaviour, the data shows that up to 25% of adolescents with a diagnosis of AjD engage in this behaviour ³⁰ while among adults with AjD the figure is 60% ³⁷. AjD is the diagnosis in up to one third of young people who die by suicide ³⁸ while among all suicide deaths in the developing world it is the most common diagnosis ³⁹. This data shows that far from being mild, the impact of AjD on behaviour is significant and that regarding the diagnosis as sub-threshold is not supported by the data.

3. Distinguishing AjD from normal adaptive stress response

The current classifications fail to distinguish between adaptive and maladaptive reactions to stress. DSM tries to address this by stating that a diagnosis of AjD is only made when the distress is of clinical significance⁴⁰, and there are two components to this. The distress must be

- ✚ in excess of what would normally be expected
- or
- ✚ impairment in social or occupational function.

In relation to the first of these, one of the most insightful critics of DSM-IV⁴¹ points to the over-inclusiveness of its diagnostic criteria for a range of condition. In relation to AjD Wakefield's criticism is not of the concept per se but of the actual criteria, pointing out that the first criterion of "marked distress in excess of what would be expected" would allow the top third in the normal distribution of mood reactivity to be classified as disordered and that the criteria do not take account of contextual factors that might cause this excess in distress. For example the loss of a job for one person might be manageable while for another it could heap poverty on a family resulting in distress that might not be inappropriate in the circumstances.

Cultural differences in the expression of emotion will also need to be considered since some are more expressive than others. In liaison psychiatry, where the diagnosis of AD is most frequently made, a knowledge of "normal" coping with illness is essential and the diagnostic process will be guided by the extent to which an individual's symptoms are in excess of this. Some might argue that the fact of visiting a doctor indicates abnormal distress yet the tendency to consult is determined by factors additional to illness including cultural and personal attitudes to symptoms. This the mere fact of a consultation should not of itself be taken as a proxy measure of excessive distress. Neither should the decision to refer to the psychiatric services since this too is governed by factors that are not always related to symptom severity but often by a wish "to do something" under pressure from a patient in the face of continuing distress.

Because AD is a diagnosis that is made in the context of a stressor preceding the onset of symptoms, there is a danger that any distress following such an event might be labelled as a disorder⁴² a view echoed eloquently in the comment.⁴³ "[T]here may well be a latent genius in these labels, for professionals, for laypersons and for society, because they represent psychiatry's recognition of the existential limits and uncertainties of living. Beware a Trojan horse, however; these categories, if widely used, could medicalise most of life." Clinical judgement therefore plays a large part in making the diagnosis of AjD in the current criterion vacuum and future classifications should accord weight to culture, context and personal circumstances in differentiating normal from the pathological distress that is AjD.

Among children and adolescents there are similar problems with distinguishing normal from pathological reactions, to those encountered in adults. Stressors may be normative (generic) experienced by all children⁴⁴ non normative peculiar to the individual e.g. acute bereavement, chronic such as bullying or minor but cumulative becoming more or less stressful according to their number, timing and synchronicity.

The second criterion requiring impairment in functioning is arguably a more robust indicator of disorder since it is this which leads to treatment seeking. For example the inability to work or to care for dependents is potentially a significant indicator of impairment. However there may be situations where functioning is reduced in the presence of non-pathological reactions. For example if the circumstances are especially traumatic, such as the loss of a child, the period of impaired function may be longer than anticipated in those with non-pathological responses. While these caveats with regard to functioning should be bourn in mind, in general impairment in functioning is an important indicator of disorder.

DSM-IV does NOT require the presence of BOTH symptoms and functional impairment, so this additional component of the clinical significance criterion probably gives a spurious confidence that normal adaptive processes are not being pathologised.⁴⁵ On the other hand ICD-10 requires that both elements, excessive symptoms and functional impairment, are present before AjD can be diagnosed.

Thus the clinical significance requirement, with its two components, while seemingly narrowing the application of the AD diagnosis⁴⁶ is of limited usefulness as currently applied in DSM and the ICD approach is preferred by these authors..

The evaluation of functioning in children places special demands on the assessor since it has to be set against the demands of the developmental stage, the degree of dependency and autonomy in key relationships whether parent-child, other children or the wider social network. The presence of pre-existing impairment and extant vulnerabilities such as learning disability and developmental disorders, must also be considered when making the evaluation.

4. Distinguishing AjD from major depression and other psychiatric disorders

Major depression/depressive episode: Because of the hierarchical nature of ICD and DSM AjD cannot be diagnosed once the criteria for another condition are met. The condition that most frequently trumps AjD in DSM and ICD is major depression/depressive episode. This is evident from studies that compare the clinical with the research approach, in which rigid diagnostic criteria are applied. For example in a study of those presenting because of self-harm the clinical diagnosis was AjD but using a structured interview this changed to major depression¹⁴. This clearly points to overlap when symptoms and functioning are measured.

However, there is a clear point of departure between the two conditions when other variables are considered. Suicidal behaviour occurs earlier in the course of AjD as compared to major depression⁴⁷ and the interval from suicidal communication to completion of suicide is shorter⁴⁸. The socio-demographic profile and childhood risk variables⁴⁷ differ between the two groups and among adolescents dying by suicide⁴⁹ there was much less evidence of prior emotional or behavioural problems. In addition the re-admission rates for those with AjD are significantly lower than for those with major depression, generalised anxiety or dysthymia⁵⁰ and hospitalisation is also

shorter⁵. These highlight the need for the clearer operationalisation of AjD in future classifications.

Biological measures are unlikely to be helpful in clinical practice but they have been applied in studies of AjD. Post-dexamethasone suppression, cortisol levels have been shown to be negatively correlated with symptom scores in major depression but not in those with AjD⁵¹. In those with AjD in the context of workplace bullying DST has been found to be normal^{52, 53}. Thus these studies point definitively to the distinction between major depression/depressive episode and AjD.

PTSD: A further but lesser area of potential overlap is with post traumatic stress disorder (PTSD). The conflation is not so much related to the symptoms of these disorders but to the stressors themselves. There has been an expansion in the stressors that are deemed to trigger PTSD from those that are potentially life threatening, as originally described, to events that are less traumatic such as financial problems or watching distressing images on television – a phenomenon called “criterion creep”⁵⁴. In clinical practice a diagnosis of PTSD is often made reflexively⁵⁵ once such an event is identified although AjD might be a more appropriate diagnosis.

Other disorders: Another possible area of overlap is with anxiety disorders especially generalised anxiety but there is little literature on this. Others have focussed on psychosomatic symptoms⁵⁶ and found considerable overlap with AjD leading the authors to recommend that these dimensions provide more useful clinical and treatment information than AjD alone.

5. Developing an operational definition of AjD for ICD-11 and DSM-V

It is clear from the data available that AjD is sufficiently severe and distinct from other disorders especially major depression on a range of severity and other measures such as suicidal behaviour, aetiology, biology, course and prognosis to warrant upgrading from its sub-syndromal status to that of a full blown and independent psychiatric disorder. While details of the criteria that might be adopted for AjD in DSM-V and ICD-11 is beyond the scope of this paper, they would broadly encompass the inclusion of dysfunction as well as symptoms before the threshold for disorder would be reached. The context in which the symptoms arise, both personal, social and interpersonal, should be considered and consideration given to weighting some symptoms in the major depression/depressive episode criteria as suggested by some⁵⁷. Some have expressed the view that day to day events, such as marriage, should not be included⁵⁸ and that AjD would only be considered when more traumatic events act as triggers. However this would exclude from the diagnosis of AjD those who due to vulnerability decompensate in response to stressors of lesser severity than those who are more resilient. Criteria for the DSM-V revision have already been suggested⁵⁹ and these could broadly be adapted for ICD-10 as harmonisation between the two classifications is sought.

AjD and structured interviews

Structured interviews are considered the gold standard for diagnosis in psychiatry. How do these “gold standard” instruments diagnose AD and what criteria are applied?

Diagnostic Instruments: The Clinical Interview Schedule (CIS)⁶⁰ and the Composite International Diagnostic Interview (CIDI)⁶¹ do not incorporate AD at all. The Schedule for Clinical Assessment in Neuropsychiatry (SCAN)⁶² does include AjD but only at the end of the interview in Section 13 which deals with Inferences and Attributions. This comes after the criteria for all other disorders have been completed and there are no specific questions with regard to AjD to assist the interviewer, relying instead on clinical judgement.

The Structured Clinical Interview for DSM-IV (SCID)⁶³ also includes a section dealing with AjD but the instructions to interviewers specify that this diagnosis is not made if the criteria for any other psychiatric disorder are met, with the de facto effect of relegating it to a sub-syndromal disorder. In light of the very low threshold for diagnosing major depression, an issue that has been alluded to above, it is likely that even in studies using SCID and purporting to be inclusive of AjD, major depression will be diagnosed, superceding AjD, irrespective of the context in which the symptoms have arisen. These concerns are evident from one of the few studies to compare clinical with diagnosis by structured interview. This (14 Taggart) compared clinical and SCID diagnosis in a deliberate self harm population. A clinical diagnosis of AjD was made in 31.8% and major depression in 19.5% but using SCID the proportions were changed to 7.8% and 36.4% respectively. This indicates that the clinical perspective on AjD is not captured by structured interviews.

The Mini International Neuropsychiatric Interview (M.I.N.I.)⁶⁴ also incorporates a section on adjustment disorder but, as in SCID, it is trumped when any other diagnosis is made and so is likely to have similar problems when evaluating AjD.

So, while structured interviews have greatly facilitated epidemiological research in psychiatry, the possibility that they are overly rigid, having been designed for use by lay interviewers, cannot be excluded. This is especially pertinent for a diagnosis such as AjD which relies heavily on clinical judgement, context and presumptive longitudinal course rather than symptoms alone.

As a result of the problems with the current crop of structured diagnostic instruments attempts have been made to identify suitable screening instruments for AjD.

Screening instruments: Because there is symptom overlap with major depression and with generalised anxiety, there is a possibility that instruments which screen for depression or which measure severity might identify those with AjD. A number of scales have been used for this purpose including the Zung depression scale which has been shown to be an adequate screen for AjD and major depression combined⁶⁵ but when compared to SCID has inadequate sensitivity and specificity⁶⁶. A study of health-care workers with “reactive depression”, an old-fashioned diagnosis but one which encapsulates the concept of AjD most closely, found little correlation with the Zung scale score⁶⁷. Efforts to develop an AjD screening instrument using a coping measure have also been unsuccessful⁶⁸ and while the Hospital Anxiety and Depression Scale (HADS) has been used for screening purposes in cancer patients it does not distinguish between major depression and AjD⁶⁹. Similar problems arose when the 1-Question Interview and the Impact Thermometer⁷⁰ were tested for their ability to screen for AjD.

The Inventory of Depressive Symptomatology ⁷¹ might have a role in distinguishing AjD from major depression and it has been used in one study examining symptoms in major depression. It found that non-environmentally induced disorder had more melancholic symptoms and a different quality to the mood changes compared to environmentally triggered disorder. Further investigation of this are clearly required.

Making the diagnosis in clinical practice:

Since there are no diagnostic criteria, with a paucity of research to assist the clinician, the diagnosis of AD is entirely a clinical one. The following pointers may be helpful

1. The stressor

AjD is unique in that it is one of the few conditions that is diagnosed on the basis of aetiology and the corollary is that it cannot be diagnosed in the absence of a stressor. The event must be external and occur in close time proximity to the onset of symptoms, The longer the time period between the triggering event and the onset of symptoms the less likely is the diagnosis to be AD – for this reason a period of 3 months between event and symptom onset is specified in DSM-IV TR and 1 month in ICD-10. Caution must be exercised when this gap is relatively long for two reasons: firstly those who are depressed often attach significance to particular events, that in themselves were neutral in effect at the time, in an “effort at meaning” and secondly recall bias may lead to an unreliable date of the event. The 3 month upper limit may prove to be excessively long and it is difficult to ascertain the empirical data on which this is based.

Concerning the type of event, there is little to assist the clinician in distinguishing AD from major depression. While 100% of those with a diagnosis of AD have recent life events, 83% of those with major depression have also have such events, with more related to marital problems and fewer to occupational or family stressors in the AD group ⁷². Such differences, while statistically significant, are unlikely to be clinically meaningful in an individual patient since these figures show that they are not exclusive as precipitants to either major depression or AjD. And the events can range in severity from those that are generally regarded as mild, such as a row with a boyfriend, to those that are more serious. This will be mediated by individual vulnerability

2. Vulnerability

In the preamble to the section on adjustment disorder ICD 10 states “Individual vulnerability and risk plays a greater role than in other disorders” such as PTSD or acute stress reactions. However it is unclear on what evidence this is based. By contrast, DSM-IV-TR is silent on this issue. The possibility that a diathesis-stress model operates is worthy of consideration and personality is arguably the most obvious. There have been few studies directly comparing AjD against other disorders to allow definitive claims about the role of personality and caution is more advisable in the current state of knowledge. The relevant studies can be classified in 2 broad

groups – directly examining AjD and indirect studies that examine diagnoses akin to AjD.

Direct studies: The frequency of personality disorder among those with AjD in comparison to those with other depressive disorders seems to be no different²⁰ although studies are few and numbers small. Other investigators have focussed on personality dimensions, especially neuroticism. Using subjects chosen from the military with a diagnosis of AjD comparisons were made with those who had no psychiatric disorder and neuroticism emerged as one of the dimensions predisposing to AjD⁷³. Attachment style has also been examined and maternal over protection was found to be a risk factor for later AjD^{74 75} while paternal abuse was associated with the severity of the disorder⁷⁵. The authors suggested that traumatic childhood experiences, over which the child had no control, resulted in cognitive style associated with a sense of helplessness, leading to distress and depressive symptoms.

Indirect studies: Studies using terminologies that imply a diagnosis of AjD such as “reactive” depression, “non-endogenous” or “situation” depression are also worthy of study although there is a caveat that these may not be identical to AjD due to differences in the definitions in the earlier classifications. One such study⁷⁶ found that the strongest relationship was between pre-morbid neuroticism and a non-endogenous symptom pattern and evidence of “oral dependent” personality. The findings in relation to neuroticism and a non-endogenous pattern of symptoms were replicated by others⁷⁷ in studies of subjects and their relatives⁷⁸.

3. Symptoms

The absence of clear criteria for AjD in either DSM-IV or ICD-10 means that greater weight attaches to clinical judgement than in most other current conditions. Symptoms of low mood, sadness, worry, anxiety, insomnia, poor concentration, mood reactivity, having their onset following a recent stressful event are likely indicators of a diagnosis of AjD although it must be bourn in mind that major depression can also present similarly. Mood disturbance is often more noticeable when the person is cognitively engaged with the event such as when speaking about it while at other times mood is normal and reactive. This removal of the person from the stressful situation is associated with a general improvement in symptoms. In the case of those who develop AjD in response to serious illness, changes in mood are related to changes in the illness itself.

The more typically “melancholic” the symptoms are i.e. diurnal change, early morning wakening, loss of mood reactivity etc. the less likely is the diagnosis is AjD and to be major depression/depressive episode. A family history of depression might also suggest a depressive episode. These findings were suggested by a study⁷⁹ comparing subjects with major depression, with and without physical co-morbidity. Those with physical illness were less likely to display these features raising the possibility that the greater the environmental risk factors the less likely are the typical melancholic symptoms of depression to be present. Since AjD represents, par excellence, a disorder in which environmental factors are prominent, it is possible that these symptoms will distinguish those with AjD from those with more biologically determined depression.

A clinical opinion that the symptoms are triggered and maintained by the stressor and are likely to resolve spontaneously is a subjective one similar to judgements about quality of mood. Nonetheless in the absence of diagnostic criteria such judgements are likely to enter the diagnostic process.

Due to the low symptom threshold for diagnosing major depression it is easy to make a diagnosis of this condition rather than AjD. And while the NICE guidelines on depression recommend a period of “watchful waiting”⁸⁰ so as to allow for the possibility of spontaneous resolution, under pressure from the patient, their family or the doctor’s own desire “to do something”, a diagnosis of major depression (or generalised anxiety) may be made and antidepressants prescribed.

Difficulties also arise when the stressors, and hence the symptoms, are persistent and have little likelihood of resolving e.g. a person, made redundant whose dependants experience ongoing financial hardships. Antidepressants may be prescribed on pragmatic grounds as there is no way of establishing if the symptoms are likely to spontaneously remit or if they are now independent of the initial trigger and constitute major depression. The absence of a response to antidepressants should raise the possibility that this is an AjD and rather than engaging in protracted trails of multiple agents the offer psychological therapies might be of benefit. This must be set against the knowledge that a proportion of people with depressive illness do not respond to antidepressants.

A further consideration is that what appears to be a single stressor i.e. a serious illness diagnosis, may be associated with ongoing symptoms as different facets of the diagnosis impinge upon the patient e.g. diagnosis, the initiation of painful treatments, treatment failures etc. Failure to appreciate that rolling stressors prolong symptoms might lead to an erroneous diagnosis of major depression although this is recognised in the definition of AD when it refers to the consequences of the initial stressor prolonging symptoms (criterion E in DSM-IV).

Based on the predominant symptoms, several subtypes are recognised by DSM-IV and ICD-10 but AjD with depressive symptoms has received the most research attention while for treatment AjD with anxiety has been most studied.

Table 2 Subtypes of adjustment disorder in DSM-IV and ICD-10

DSM-IV	ICD-10
AjD with depressed mood (309.0)	AjD with brief depressive reaction F43.20
AjD with anxiety (309.24)	AjD with prolonged depressive reaction F43.21
AjD with depression and anxiety (309.28)	AjD with mixed anxiety and depressive reaction F43.22
AjD with disturbance of conduct (309.3)	AjD with predominant disturbance of other emotions F43.23
AjD with disturbance of emotion and conduct (309.4)	AjD with predominant disturbance of conduct F43.24
AjD non-specified (309.9)	AjD with mixed disturbance of emotions and conduct F43.25

	AjD with other specified predominant symptoms F43.26
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The subtypes are broadly similar in both classifications but apart from AjD with depressed mood, the most commonly diagnosed subgroup in adults, they have received little attention. However the pattern of subgroup diagnosis differs with the depressed subgroup being more common in adults than in the younger subgroups while AjD with predominant disturbance of conduct or of conduct and emotions are more commonly diagnosed among children and adolescents.

In addition to the above subtypes embitterment⁸¹ may also be prominent in some although this is not yet classified in either DSM-IV or ICD 10.

4 Differential Diagnosis

Distinction from normal responses: The first consideration is whether the person with symptoms is suffering from a psychiatric disorder. It is possible that the response is appropriate taking into consideration a number of features that include

- ✚ the severity of symptoms and their duration
- ✚ the impact on functioning taking into account the nature of the stressor
- ✚ the personal and interpersonal context in which it has occurred
- ✚ cultural norms with regard to such responses.

Failure to do this could lead to an assumption that simply because of symptoms that the person has a disorder.

Distinction from other psychiatric disorders: Because of the symptom overlap between AD and a number of axis 1 disorders such as major depression and generalised anxiety, the possibility that these diagnoses might be present rather than AD must be considered. A problem arises if the DSM diagnostic criteria are rigidly applied since once the symptom numbers and duration are reached, the diagnosis of AD cannot be made and is trumped by any other axis 1 diagnoses. The failure to diagnose major depression, for instance, could have serious treatment and prognostic implications. Alternatively, diagnosing such disorders when a diagnosis of AD is more appropriate could re-enforce the “culture of prescribing” whereas spontaneous recovery is likely to occur.

Post-traumatic stress disorder (PTSD) and acute stress disorder require the presence of a stressor of a magnitude that would be traumatic for almost everybody and the symptom constellation is also specific, although both of these have recently been challenged.⁸² Moreover, not everybody exposed to such traumatic events responds by developing PTSD and the possibility that other disorders can follow instead needs to be considered. For those not meeting the PTSD diagnostic criteria but with significant symptoms and/or functional impairment, AD should be considered a possible alternative.

Finally, what may appear to be an adjustment disorder, because of the sub-threshold level of the symptoms or the lack of functional impairment might be an axis 1 disorder in evolution that only emerges as a recognisable syndrome after a period of watchful waiting. Thus the revision of an index AD diagnosed may be necessary at times, especially if the are persisting symptoms in spite of termination of the stressor.

For those experiencing long-standing stressors, the persistently low mood that is the response to these may resemble and be misclassified as dysthymia even as enduring personality change after psychiatric illness (ICD only) or depressive personality disorder (DSM only).

5. Co-morbidity

Few studies have examined the disorders that are co-morbid with AjD, an exercise that is hampered by the fact that the criteria for AjD preclude axis 1 co-morbidity. Yet a recent study ¹⁹ found that almost half of patients exhibited co-morbidity with major depression or PTSD. Surprisingly complicated grief and AjD were not significantly co-morbid. These findings should not be surprising since co-morbidity is commonly associated with all psychiatric disorders and in some instances, as the authors point out, may represent the co-occurrence with another disorder of different aetiology.

The relationship between substance abuse and AjD is also deserving of mention since it may explain the seeming instability of the AjD diagnosis. Firstly, substances may be misused for relief of symptoms such as anxiety and depression, which are prominent in AjD. Substances such as alcohol are themselves depressogenic and may present with mood changes leading to misdiagnosis. This may explain why in one study 5 Greenberg many with an admission diagnosis of AjD were relabelled on discharge as having a primary diagnosis of substance misuse.

Management of AjD

The evidence base for the treatment of AjD is limited due to the paucity of studies. A further problem for researchers is that these are self-remitting conditions that may not require any treatment except in exceptional circumstances and trials of interventions may therefore fail to identify any benefits due to spontaneous resolution. In general, brief therapies are regarded as being the most appropriate, with the exception that when stressors are ongoing, prolonged supportive measures may be necessary. However there is a caveat for children and adolescents diagnosed with AjD since there is evidence ²⁴ that a majority of adolescents eventually develop major psychiatric disorders. This children and adolescents need particularly close monitoring.

Three broad approaches to the management of AjD are considered – the first consists of practical measures to assist in managing the stressful situation while the other two incorporate psychological or pharmacological approaches.

Practical measures: These range from attempting to reduce the stressor by providing practical assistance e.g. a person being bullied at work might decide to invoke an internal redress system or may seek the support of the Union. A person in an abusive relationship might seek a barring order. For example, a vulnerable person taking on too much work may benefit from simple, directive advice. Harnessing family members' input, involving supportive agencies such as social services or encouraging involvement in a support or self-help group may alleviate distress.

Structured interventions are divided into psychological and pharmacological therapies and are discussed elsewhere in greater detail ⁸³.

Psychological interventions: Relaxation techniques can reduce symptoms of anxiety and more general measures that include facilitating the verbalisation of fears and emotions and exploring the meaning that the stressor has for the individual might also ameliorate symptoms. Many who are confronted by life's problems will engage in DSH, either due to hopelessness, anger or some other emotion. Assisting the person in finding alternative responses that do not involve self-destruction will be of obvious benefit and to date dialectical behaviour therapy (DBT) has the best evidence base ⁸⁴.

Interventions may be delivered individually or in groups, and family or interpersonal therapy may be of value in some contexts. The psychological therapies span the range including supportive, psycho educational, cognitive and psychodynamic approaches. Resilience enhancing techniques might also have a role and one study utilised ego enhancing therapy during periods of transition in older patients ⁸⁵ with benefit while another used "mirror therapy,"⁸⁶ in those with AjD secondary to myocardial infarction, also with benefit. In a younger population, cognitive therapy was helpful ⁸⁷ when administered to those with AjD who experienced work-related stress, while it was also of benefit among army conscripts with AjD.⁸⁸ In a study of terminally cancer patients ⁸⁹ similar improvements were found in those with AjD and other psychiatric diagnoses.

A grey literature study of 9 subjects⁹⁰ found benefits from eye movement desensitization.

Some of these psychological interventions have been tested in specific medically ill groups such as cancer patients, those with heart disease, HIV, and so on. While improvements in coping has been demonstrated, it is unclear if subjects had AjD, some were open pilot studies ⁹¹ and survival and quality of life rather than symptoms were the outcome measures in others ⁹².

Pharmacological Interventions: The basic pharmacological management of AjD consists of symptomatic treatment of insomnia, anxiety and panic attacks and the use of benzodiazepines to relieve these is common⁹³.

While antidepressants are advocated by some⁹⁴, especially if there has been no benefit from psychotherapy, there is little solid evidence to support their use. Nevertheless those with sedative properties targeting sleep and anxiety may have a role when benzodiazepines are contraindicated ⁹⁵ such as in those with a history of substance dependence.

There are few trials specifically directed to the pharmacological treatment of AjD's and these are mainly on subjects with AjD with anxiety. Some are listed in table 2.

Table 2 Summary of pharmacological trials in the treatment of AjD

Author	Treatment	Sample size
Nguyen et al 2006	Etifoxine vs Lorazepam	191 out-patients attending GP's
Voltz et al 1997	Kava-kava vs Placebo	101 out-patients
Bourin et al 1997	Valerian and others vs Placebo	91 out-patients
Ansseau et al 1996	Tianeptine vs alprazolam vs mianserin	152 patients
Razavi et al 1999	Trazadone vs clorazepate	18 cancer patients
Hameed et al 2005	Antidepressants in Major depression vs AD	96 primary care patients
De Leo 1989	Viloxazine vs placebo vs lormetazepam vs S-adenosylmethionine psychotherapy	85 out-patients

A recent study⁹⁶ comparing a benzodiazepine with a non-benzodiazepine found that the anxiolytic effects of each were similar although more responded to the non-benzodiazepine.

Two randomised placebo controlled studies examined herbal remedies including extracts from kava-kava⁹⁷ and valerian plus other extracts⁹⁸ among out-patients with AjD (with anxiety) and demonstrated a positive effect on symptoms. Two further studies, one in AjD patients with anxiety found that⁹⁹ anxiolytics and antidepressants were equally effective while a pilot study¹⁰⁰ of cancer patients with anxious and depressed mood found trazodone superior to a benzodiazepine.

One study in primary care¹⁰¹ examined the response of patients with major depression and with AjD to antidepressants using reported changes to functional disability based on case note information. Overall the AjD group was twice as likely to respond to antidepressants. However, as this was a retrospective case note study the relevance of the findings are questionable.

One study compared pharmacological and psychological interventions¹⁰² in subjects with AjD randomly assigned to supportive psychotherapy, an antidepressant, a benzodiazepine or placebo. All improved significantly.

Overall these studies lend little support for the superiority of antidepressants, and arguably for any specific treatment, in the management of AjD's but further studies are clearly required.

Conclusion

Adjustment disorders (AjDs) are common psychiatric disorders in children and adolescents. There are major problems with their diagnostic criteria in both ICD—10 and DSM-IV. The most prominent of these is the status as subsyndromal conditions. This has resulted in their being the subject of little research. Treatments are under-investigated although brief psychological interventions are likely to be the preferred option.

¹ American Psychiatric Association. Washington DC:APA Diagnostic and Statistical Manual of Mental Disorders (3rd. edition). 1980.

² World Health Organisation (WHO). The ICD-10 classification of mental and behavioural disorders: Clinical description and diagnostic guidelines (ICD-10). Geneva, WHO 1992.

³ Fabrega H and Mezzich J. Adjustment disorder and psychiatric practice: cultural and historical aspects. *Psychiatry*. 1987. 50:31-49.

⁴ Fard F, Hudgens R.W. and Welner A. Undiagnosed psychiatric illness in adolescents: A prospective study. *Arch. Gen. Psych*. 1979. 35: 279-81.

⁵ Greenberg WM., Rosenfeld D. and Ortega E. Adjustment disorder as an admission diagnosis. *Am J Psychiatry*. 1995. 152:3. 459-461..

⁶ Rosen BM, Bahn AK and Kramer M. Demographic and diagnostic characteristics of psychiatric clinic out-patients in the USA 1961. *Am J Orthopsychiatry*. 1964. 34. 455-68.

⁷ Strain, JJ, Smith, GC and Hammer, JS. Adjustment disorder: a multisite study of its utilisation and interventions in the consultation-liaison psychiatry setting. *Gen Hosp Psychiatry*. 1998. 20 (3). 139-49.

⁸ Huyse F, Herzog T, Lobo A et al Consultation-liaison psychiatric service delivery: results from a European study. *Gen Hosp Psychiatry*. 2001. 23. 124-32.

⁹ Diefenbacher A and Strain JJ. Consultation-liaison psychiatry: stability and change over a 10-year period. *Gen Hosp Psychiatry*. 2002. 24 (4), 249-56.

¹⁰ Strain, J and Diefenbacher A. The adjustments disorders: the conundrums of the diagnoses. *Compr Psychiatry*. 2008. 49. 121-30.

¹¹ Silverstone PH. Prevalence of psychiatric disorders in medical in-patients. *J Nerv Ment Dis*. 1996. 184 (1). 43-51.

¹² Okamura, H., Watanabe, T., Narabayashi, M. et al. Psychological distress following first recurrence of disease in patients with breast cancer: prevalence and risk factors. *Breast Cancer Res Treat*. 2002. 61 (2). 131-7.

¹³ Rigatelli M, Galeazzi GM and Palmieri G. Consultation-liaison psychiatry in obstetrics and gynaecology. *J Psychosom Obstet Gyhaecol* 2002. 23, 3. 165-72.

-
- ¹⁴ Taggart C, O'Grady J, Stevenson M, Hand E, McClelland R, Kelly C. Accuracy of diagnosis and routine psychiatric assessment in patients presenting to an accident and emergency department. *Gen Hosp Psychiatry*. 2006. 8, 330-5.
- ¹⁵ Myers JK, Weissman MM, Dischler GL. et al. Six-month prevalence of psychiatric disorders in three communities 1980 to 1982. *Arch. Gen. Psychiatry*. 1984. 41. 959-67.
- ¹⁶ Kessler RC, Chiu WT, Demler O, Merikangas KR, Walters EE: Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Arch Gen Psychiatry* 2005;62:617-627.
- ¹⁷ Jenkins R, Lewis G, Bebbington P, Brugha T, Farrell M, Gill B, Meltzer H: The National Psychiatric Morbidity surveys of Great Britain--initial findings from the household survey. *Psychol Med* 1997;27:775-789.
- ¹⁸ Ayuso-Mateos JL, Vazquez-Barquero JL, Dowrick C. et al Depressive disorders in Europe: prevalence figures from the ODIN study. *Br. J Psychiatry* 2001. 179. 308-316.
- ¹⁹ Maercker, A, Forstmeier, S, Enzler, A et al. Adjustment disorder, post-traumatic stress disorder, and depressive disorders in old age: findings from a community survey. *Compr Psychiatry* 2008. 49,2. 113-20.
- ²⁰ Casey PR, Dillon S, and Tyrer, P. The diagnostic status of patients with conspicuous psychiatric morbidity in primary care. *Psychol. Med.* 1984. 14. 673-681.
- ²¹ Blacker CVR and Clare AW. The prevalence and treatment of depression in general practice. *Psychopharmacology*. 1988. 14-17.
- ²² Shear KM, Greeno C, Kang J et al Diagnosis of non-psychotic patients in community clinics. *Am J Psych* 2000. 157. 581-587.
- ²³ Hill P. Adjustment disorder Ch. 31. 510-19. In *Child and Adolescent Psychiatry*. Eds. Rutter M and Taylor EA. Blackwell Scientific: Oxford. 2002.
- ²⁴ Andreasen NC and Hoenck PR. The predictive value of adjustment disorders: a follow-up study. *Am J Psychiatry*. 1982. 139. 584-90.
- ²⁵ Bird HR, G MS, Yager T et al. Risk factors for maladjustment in Puerto Rican children. *Journal of the American academy of child and adolescent psychiatry* 1989. 28. 847-50.
- ²⁶ Almquist F, Kumpulainen K, Ikaheimo K et al. Psychiatric disturbances among pre-pubertal children in southern Finland. *Social Psychiatry and Psychiatric Epidemiology*. 1998. 33. 310-18.
- ²⁷ Doran RJ and Petti TA. Clinical and demographic characteristics of child and adolescent partial hospital patients. *J Am Acad Child Adolesc Psychiatry*. 1989. 28. 66-9.
- ²⁸ Steinhausen HC and Erdin A. A comparison of ICD-9 and ICD-10 diagnoses of child and adolescent psychiatric disorders. *J Child Psychol Psychiatry*. 1991. 32. 909-20.
- ²⁹ Kovacs M, Ho V and Pollack MH. Criterion and predictive validity of diagnosis of adjustment disorder: a predictive study of children with new onset insulin-dependent diabetes mellitus *Am J Psychiatry*. 1995. 152. 552-28.
- ³⁰ Pelkonen M., Marttunen M, Henriksson M et al. Suicidality in adjustment disorder, clinical characteristics of adolescent outpatients. *Eur Child Adolesc Psychiatry*. 2005. 14, 174-80.
- ³¹ Portzky G., Audenaert K., Heeringen K. Adjustment disorder in the course of the suicidal process in adolescents. *J Affect Disord*. 2005. 87 (2-3). 265-70.

-
- ³² Olfson M and Marcus SC. National patterns in antidepressant medication treatment. *Arch Gen Psychiatry*. 2009. 66,8. 848-56.
- ³³ Regier DA, Kaelber CT, Rao DS et al. Limitations of diagnostic criteria and assessment instruments for mental disorders: Implications for research and policy. *Arch Gen Psychiatry*. 1998. 55. 105-115.
- ³⁴ Parker, G. Beyond major depression. *Psychological Medicine*. 2005.35: 467-474
- ³⁵ Kendell RE. *The Role of Diagnosis in Psychiatry*. Blackwell Scientific. 1972.
- ³⁶ Casey, P, Maracy, M, Kelly, BD et al. Can adjustment disorder and depressive episode be distinguished? Results from ODIN. *J Affect Disord*. 2006. 92 (2-3), 291-297.
- ³⁷ Kryzhananovskaya L and Canterbury R 2001. Suicidal behaviour in patients with adjustment disorders. *Crisis*. 2001. 22,3. 125-131.
- ³⁸ Lonnqvist JK, Henricksson MM, Sisometsa et al Mental disorders and suicide prevention. *Psychiatry Clin Neurosci* 1995. 49. S1. S111-S116.
- ³⁹ Manoranjitham SD, Rajkumar AP, Thangadurai P et al. Risk factors for suicide in rural south India. *Br J Psychiatry*. 2010. 196. 26-30.
- ⁴⁰ Maj M.. Are we able to differentiate between true mental disorders and homeostatic reactions to adverse life events. *Psychother and Psychosom*. 2007. 76,5. 257-9
- ⁴¹ Wakefield J. Diagnosing DSM-IV- part 1: DSM-IV and the concept of disorder. *Behav Res Ther*. 1997. 35, 7. 633-649.
- ⁴² Rosen GM, Spitzer RL and McHugh PR. Problems with the post traumatic stress disorder diagnosis and its future in DSM-V. *Br J Psychiatry*. 2008.192. 3-4.
- ⁴³ Kleinman A. The normal, the pathological and the existential. *Compr Psychiatry*. 2008. 48. 111-112.
- ⁴⁴ Rice KG, Herman MA and Petersen AC. Coping with challenge in adolescence: A conceptual model and psycho-educational Intervention. *J Adolesc*. 1993. 16,3. 235-51.
- ⁴⁵ Horwitz AV, Wakefield JC: *The loss of sadness: How Psychiatry Transformed Normal Sorrow into Depressive disorder*. New York, NY, Oxford University Press, 2007.
- ⁴⁶ Spitzer RL, Wakefield JC: DSM-IV diagnostic criterion for clinical significance: does it help solve the false positives problem? *Am J Psychiatry* 1999. 156, 1856-1864.
- ⁴⁷ Polyakova I, Knobler HY, Ambrumova A et al Characteristics of suicide attempts in major depression versus adjustment disorder. *J Affect Disord* 1998. 47, 1-3. 159-67.
- ⁴⁸ Runeson BS, Beskow J and Waern M. The suicidal process in suicides among young people. *Acta Psychiatr Scand*. 1996. 93,1. 35-42.
- ⁵⁰ Jones R, Yates WR, and Zhou MH. Readmission rates for adjustment disorders: Comparison with other mood disorders. *J Affect Disord*. 71 (1). 199-203. (2001).
- ⁵¹ Lindqvist D, Traskman-Bendzl L and Vang F.. Suicidal intent and the HPA axis characteristics of suicide attempters with major depression and adjustment disorders. *Archives of Suicide Research*. 2008. 12,3. 197-207.
- ⁵² Rocco A, Martocchia A, Frugoni P et al. Inverse correlation between morning cortisol levels and MMPI psychasthenia and depression scale scores in victims of mobbing with adjustment disorders. *Neurology and Endocrinology Letter*. 2007. 28,5. 610-3

-
- ⁵³ Di Rosa AE, Gangemi S, Cristani M et al . Serum levels of carbonylated and nitrosylated proteins in mobbing victims with workplace adjustment disorders. *Biol Psychol.* 2009. 82,3. 308-11.
- ⁵⁴ Rosen GM. Traumatic events, criterion creep, and the creation of pretraumatic stress disorder. *Sci Rev Ment Health Pract* 2004; 3: 46–7.
- ⁵⁵ McHugh PR and Treisman G. PTSD: A problematic diagnostic construct. *Journal of Anxiety Disorders.*2007. 21.211-22.
- ⁵⁶ Grassi L, Mangelli L, FAva L et al Psychosomatic characterisation of adjustment disorders in a medical setting: some suggestions for DSM-V. *J Affect. Disord.* 2007. 101, 251-4
- ⁵⁷ Taylor, MA and Fink, M. Restoring melancholia in the classification of mood disorders. *J Affect Disord.* 2008. 105,(1-3), 1-14.
- ⁵⁸ Maercker A, Einsle F, Köllner V.. Adjustment disorders as stress response syndromes: a new diagnostic concept and its exploration in a medical sample. . *Psychopathology*; 2007. 40,3. 135-149.
- ⁵⁹ Baumeister H, Maercker A and Casey P. Adjustment disorders with depressed mood: A critique of its DSM-IV and ICD-10 conceptualization and recommendations for the future. *Psychopathology.* 2009 42. 139-47.
- ⁶⁰ Lewis G, Pelosi AJ, Araya R and Dunn G. Measuring psychiatric disorders in the community: a standardised assessment for use by lay interviewers. *Psychol Med.* 1992. 22, 465-486.
- ⁶¹ Kessler RC and Ustun TB. The World Mental Health (WMH) survey initiative Version of the World Health Organisation (WHO) Composite International Diagnostic Interview (CIDI). *Int J Methods Psychiatr Res.* 2004. 13, 93-121.
- ⁶² Wing, J. K., Babor, T., Brugha, T., et al. SCAN: Schedules for Clinical Assessment in Neuropsychiatry. *Arch Gen Psychiatry*, 1990.47, 589-593.
- ⁶³ First MB, Spitzer RL, Williams JW et al Structured Clinical Interview for DSM-IV (SCID 1). New York Biometric Research Department, New York State Psychiatric Institute, USA (1995).
- ⁶⁴ Sheehan D., Lecrubier Y, Sheehan KH et al The Mini-International Neuropsychiatric Interview (M.I.N.I.): the development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10. *J Clin Psychiatry.* 1998. 59 Suppl 20. 22-33.
- ⁶⁵ Passik SD, Kirsh KL, Donaghy, K. et al. An attempt to apply the Zung Self Rating Depression Scale as a “lab test” to trigger follow-up in ambulatory oncology clinics: Criterion validity and detection. *J Pain Symptom Manage.* 2001. 21, 273-281.
- ⁶⁶ Kirsh KL, McGrew JH, Dugan M and Passik, SD. Difficulties in screening for adjustment disorder, Part 1: Use of existing screening instruments in cancer patients undergoing bone marrow transplantation. *Palliative and Supportive Care.* 2004. 2, 23-31.
- ⁶⁷ Gawronski I and Privette G. Empathy and reactive depression. *Psychol Rep.* 1997. 80, 1043-1050.
- ⁶⁸ Kirsh KL, McGrew JH and Passik, SD. Difficulties in screening for adjustment disorder, Part II: An attempt to develop a novel self-report screening instrument in cancer patients undergoing bone marrow transplantation. *Palliat Support Care.* 2004. 2, 33-4.
- ⁶⁹ Akechi N, Okuyama T, Sugawara Y, Shima Y, Furukawa TA and Uchitomi Y. Adjustment disorders and post traumatic stress disorder in terminally ill cancer patients: associated and predictive factors. *J Clin Oncol.* 2004. 22 (10), 1957-1965.

-
- ⁷⁰ Akizuki N. and Akechi T et al. Developing a brief screening interview for adjustment disorder and major depression in patients with cancer. *Cancer*. 2003. 97 (10) 2605-2613.
- ⁷¹ Trivedi MH, Rush AJ, Ibrahim HM et al The Inventory of Depressive Symptomatology, Clinician Rating (IDS-C) and Self-Report (IDS-SR), and the Quick Inventory of Depressive Symptomatology, Clinician Rating (QIDS-C) and Self-Report (QIDS-SR) in public sector patients with mood disorders: a psychometric evaluation. *Psychol. Med.* 2004.34. 73–82.
- ⁷² Despland JN, Monod L, Ferrero F: Clinical relevance of adjustment disorder in DSM-III-R and DSM-IV. *Compr Psychiatry* 1995. 36. 454-460.
- ⁷³ For-Wey L, Fin-Yen L and Bih-Ching S. The pre-morbid personality in military students with adjustment disorder. *Military Psychology*. 2006. 18,1. 77-88.
- ⁷⁴ For-Wey L, Fin-Yen L and Bih-Ching S. The relationship between life adjustment and parental bonding in military personnel with adjustment disorder in Taiwan. *Military Medicine* .2002. 167, 8. 678-682.
- ⁷⁵ Giotakos O and Konstantakopoulos G. Parenting received in childhood and early separation anxiety in male conscripts with adjustment disorder. *Military Medicine*. 2002. 167 (1). 28-33.
- ⁷⁶ Paykel ES, Klerman GL and Prusoff BA. Personality and symptom pattern in depression. *Br J Psychiatry*. 1976. 129. 327-34.
- ⁷⁷ Benjaminsen S.. Primary non-endogenous depression and features attributed to reactive depression. *Journal of Affective Disorders*. 1981. 3,2. 245-59.
- ⁷⁸ Coryell W, Winokur G, Maser JD. Recurrently situational (reactive) depression: a study of course, phenomenology and familial psychopathology. *J Affect Disord*.1994. 31,3. 203-10.
- ⁷⁹ Yates WR, Mitchell J, Rush AD et al. Clinical features of depressed out-patients with and without co-occurring medical conditions in STAR*D. *Gen Hosp Psychiatry*. 2004. 26 (6), 421-429.
- ⁸⁰ National Institute for Clinical Excellence. Depression: Management of Depression in Primary and Secondary Care. Clinical Guideline 23. <http://www.nice.org.uk/CG023NICEguideline> (2004).
- ⁸¹ Linden M.The Posttraumatic Embitterment Disorder. *Psychotherapy and Psychosomatics* 2003., 72, 195 – 202.
- ⁸² Rosen GM, Spitzer RL and McHugh, PR. Problems with the post-traumatic stress disorder diagnosis and its future in DSM-V *Br. J Psychiatry*. 2008. 192, 3-4.
- ⁸³ Casey P. Adjustment disorder: Epidemiology, diagnosis and treatment. *CNS Drugs*. 2009. 23,11.927-38.
- ⁸⁴ Linehan MM, Comtois MA, Murray AM et al Two year randomised controlled trial and follow-up of dialectical behaviour therapy vs therapy by experts for suicidal behaviour and borderline personality disorder. *Arch Gen Psychiatry*. 2006. Jul. 63, 7. 557-66.
- ⁸⁵ Frankel M. Ego enhancing treatment of adjustment disorders of later life. *J Geriatr Psychiatry*. 2001. 34. 221-23.
- ⁸⁶ Gonzalez-Jaimes EI and Tirnball-Plaza B. Selection of psychotherapeutic treatment for adjustment disorder with depressive mood due to acute myocardial infarction. *Arch Med Res* 2003. 34. 298-304.
- ⁸⁷ Van der Klink JJI, Blonk RWB et al Reducing long term sickness absence by an activating intervention in adjustment disorders: a cluster randomised design. *Occup Environ Med* 2003. 60, 429-37.

-
- ⁸⁸ Nardi C, Lichtenberg P and Kaplan Z. Adjustment disorder of conscripts as a military phobia. *Military Medicine*. 1994. 159. 612-16.
- ⁸⁹ Akechi T, Okuyama T, Surawara Y et al Major depression, adjustment disorders and post-traumatic stress disorder in terminally ill cancer patients: associated and predictive factors. *J Clin Oncol*. 2004. May 15; 22 (10). 1957-65.
- ⁹⁰ Mihelich ML. Eye movement desensitization and reprocessing treatment of adjustment disorder. *Dissertation Abstracts International*. 2000. 61, 1091.
- ⁹¹ Markowitz JC, Klerman GL and Perry SW. Interpersonal psychotherapy of depressed HIV-positive outpatients. *Hosp Community Psychiatry*. 1992. 43. 885-90.
- ⁹² Fawzy FL, Canada AL, Fawzy NW. Malignant melanoma: effects of a brief structured psychiatric intervention on survival and recurrence at 10 ear follow-up. *Arch Gen Psychiatry*. 2003. 60: 100-03.
- ⁹³ Shaner R. Benzodiazepines in psychiatric emergency settings. *Psychiatr Ann* 2000. 30. 268-75.
- ⁹⁴ Stewart JW, Quitkin FM and Klein DF. The pharmacotherapy of minor depression. *American Journal of Psychotherapy*. 1992. 46. 23-36.
- ⁹⁵ Uhlenhuth EH, Balter MB, Ban TA et al International study of expert judgement on therapeutic use of benzodiazepines and other psychotherapeutic medications. III: Clinical features affecting experts' therapeutic recommendations in anxiety disorders. *Psychopharmacol Bull* 1995. 31. 289-96.
- ⁹⁶ Nguyen N, Fakra E, Pradel V et al Efficacy of etifoxine compared to lorazepam monotherapy in the treatment of patients with adjustment disorder with anxiety: a double blind controlled study in general practice. *Hum Psychopharmacol* 2006. 2,3. 139-49
- ⁹⁷ Voltz HP and Kieser M. Kava-kava extract WS 1490 versus placebo in anxiety disorders: a randomised placebo-controlled 25 week outpatient trial. *Pharmacopsychiatry*. 1997.30.1-5.
- ⁹⁸ Bourin M, Bougerol T, Guitton B et al. A combination of plant extracts in the treatment of outpatients with adjustment disorder and anxious mood: controlled study versus placebo. *Fundam Clin Pharmacol* 1994. 11. 127-32
- ⁹⁹ Ansseau M, Bataille M, Briole G et al. Controlled comparison of tianeptine, alprazolam and mianserin in the treatment of adjustment disorders with anxiety and depression. *Hum Psychopharmacology*. 1996. 11. 293-98.
- ¹⁰⁰ Razavi D, Kormoss N, Collard A. et al Comparative study of the efficacy and safety of trazadone versus clorazepate in the treatment of adjustment disorders in cancer patients: a pilot study. *J Int Med Res* 1999. 27. 264-72.
- ¹⁰¹ Hameed, U, Schwartz, TL, Malhotra, K. et al. Antidepressant treatment in the primary care office: outcomes for adjustment disorder versus major depression. *Ann Clin Psychiatry*. 2005. 17,2. 77-81.
- ¹⁰² De Leo, D. Treatment of adjustment disorders: a comparative evaluation. *Psychol Rep* 1989. 64, 51-4.