

Best practice intervention for the management of adjustment disorders:
Annotated Information Package

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Best practice intervention for the management of Adjustment Disorders (AD): Annotated Information Package

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The AIP was prepared by Dr Wasan Ali (NZHTA Researcher). It should be read in conjunction with the appended Information Package prepared by Susan Bidwell (NZHTA Information Specialist Manager).

WHAT IS AN ANNOTATED INFORMATION PACKAGE?

Annotated Information Packages (AIPs), prepared by a NZHTA Reviewer, are overviews of an appended Information Package (IP). The IP provides a folder of printed material relating to a specific topic area identified from a systematic search strategy of electronic databases and website resources. The materials include lists of abstracts, key full text papers (where readily available from local resources), and website resources.

The AIP is aimed at giving the client an informed “guided tour” of their IP to increase its usefulness. The AIP report outlines the contents of the IP, highlights information of particular interest and relevance, summarises key articles, and comments on the stage and extent of the research base. It also makes suggestions for publications that the client may wish to have retrieved, and comments on the potential of the topic for evidence-based reviews, such as NZHTA Technical Brief or Systematic Review outputs. AIPs do not involve systematic processes for the critical appraisal of identified research. Another significant limitation is that full text articles of key interest are not retrieved unless freely obtainable from local resources. As a consequence of this, comments and summaries in the AIP may be based on abstracts rather than full text papers.

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Best practice interventions for the management of Adjustment Disorders (AD)

RESEARCH QUESTION

What is the best existing evidence about best-practice interventions for managing people with adjustment disorders? The question pertains to all age groups across various settings including general practice, NGO mental health community and secondary specialist services.

BACKGROUND AND SCOPE OF TOPIC

Background

Adjustment Disorder (AD) is a stress-related, short-term, nonpsychotic disturbance (Benton and Lynch 2006). Adjustment Disorders are common, and may occur in any age group. Clinical samples of adult women are given the diagnosis twice as often as men. However, in clinical samples of children and adolescents, boys and girls are equally likely to receive this diagnosis (American Psychiatric Association 2000). The prevalence of Adjustment Disorder has been reported to be between 2% and 8% in community samples of children and adolescents and the elderly. Records show that 12% of general hospital inpatients who are referred for a mental health consultation are diagnosed with adjustment disorder, as are 10-30% of those seen in mental health outpatient settings, and in as many as 50% in special populations that have experienced a specific stressor (such as following cardiac surgery (American Psychiatric Association 2000)). Individuals from disadvantaged life circumstances experience a high rate of stressors and may be at increased risk for the disorder. Adjustment disorders are widespread among working populations and are responsible for high costs in terms of suffering, sick leave, disability, and economic losses.

According to DSM IV diagnostic criteria, the essential feature of an adjustment disorder is a psychological response to an identifiable stressor that results in the development of clinically significant emotional or behavioural symptoms but do not meet the criteria for another specific Axis I disorder (American Psychiatric Association 2000).^{*} The symptoms must begin within 3 months of onset of the stressor and remit within 6 months after the cessation of the stressor. (American Psychiatric Association 2000). The stressor may be a single event, or there may be multiple stressors, which may be recurrent, or continuous, and may affect a single individual, an entire family, or a larger group or community.

Subtypes and Specifiers

Adjustment disorders are coded according to the subtype that best characterise the predominant symptoms:

^{*} *The revised 4th edition for use by primary care physicians of the Diagnostic and Statistical Manual (DSM-IV-PC) provides a useful synopsis of mental disorders most likely to be seen in primary care practice. The current system of classification is multiaxial and includes the presence or absence of a major mental disorder (axis I), any underlying personality disorder (axis II), general medical condition (axis III), psychosocial and environmental problems (axis IV), and overall rating of general psychosocial functioning (axis V).* In: Reus, V. I. (2007). Mental disorders. In D. L. Kasper, E. Braunwald, A. S. Fauci, S. L. Hauser, D. L. Longo, J. L. Jameson & K. J. Isselbacher (Eds.), *Harrison's online* (Part 15 Section 15 Chapter 371); McGraw Hill.

309.0 With depressed mood- used when symptoms such as depressed mood, tearfulness, or feelings of hopelessness are predominant.

309.24 With anxiety- used when symptoms such as nervousness, worry, or jitteriness, or, in children, fears of separation from major attachment figures predominate.

309.28 With mixed anxiety and depressed mood- used when the predominant manifestation is a combination of depression and anxiety.

309.3 With disturbance of conduct- used when the predominant manifestation is a disturbance in conduct in which there is violation of the rights of others or of major age-appropriate societal norms and rules (truancy, vandalism, reckless driving, fighting, defaulting on legal responsibilities).

309.4 With mixed disturbance of emotions and conduct- used when the predominant manifestations are both emotional symptoms and disturbance of conduct.

309.9 Unspecified- this subtype should be used for maladaptive reactions (e.g. physical complaints, social withdrawal, or work or academic inhibition) to stressors that are not classified as one of the specific subtypes of adjustment disorder.

Recent clear guidelines for the treatment of adjustment disorders are lacking (Dew et al. 2005). Despite their high prevalence, there has been relatively little research on the effectiveness of treatments for adjustment disorders especially in an occupational health care setting.

Client/population group and condition

The population group of interest is men and women of all age groups across a variety of settings including inpatients, general practice, NGO mental health community, and secondary specialist services.

Outcomes

Key quantitative outcomes relating to the effectiveness and/or safety of the specific interventions will be considered. This might include (but is not limited to):

- improvement in psychosocial functioning
- improvement in perceived quality of work life
- enhancement of psychological resources and responses
- reduction in morbidity, mortality, hospitalisations, and episodes of care
- severity of symptoms or behaviours
- level of functional impairment
- treatment efficacy
- remission of disorders
- incidence of relapse
- frequency of use of mental health services
- incidence of co-morbid disorders

This AIP is one of a series of five reports presenting the best practice recommendations for the treatment of common mental health disorders. The information provided in this AIP will be presented according to the disorders as defined by the DSM IV diagnostic criteria where applicable. The other reports present recommendations for interventions treating substance-related disorders, schizophrenia/psychotic disorders, mood disorders and anxiety disorders. Comorbid disorders are not specifically examined but are discussed in some guidelines.

METHODOLOGY

Search strategy

The search covered systematic reviews from 2000 onwards in English. Sources included the Cochrane Database of Systematic Reviews, the Database of Abstracts of Reviews of Effects (DARE), BMJ Clinical Evidence reviews, and the Health Technology Assessment database. Guidelines websites were also searched.

A search of the bibliographic databases Medline, PubMed (added in last 60 days), Embase and PsychInfo were searched for systematic reviews on treatment for adjustment disorders and linked with validated filters for systematic reviews or relevant keywords where no filters were available. As the literature located in this search was sparse, further searching for clinical trials was carried out, and it was from these results that the majority of papers included in the report were located.

The search was completed on August 20 2007. Full details of the sources searched and the strategies used are given in the attached Information Package.

Methods

The author (WA) carefully considered the contents, including identified article abstracts, of the appended IP. An overview of its contents was provided, highlighting information of particular interest and relevance. Full text articles of key interest, where freely obtainable from local resources, were retrieved and summarised. Those not retrieved were summarised based on their abstract. Based on the research identified in the IP, a description of the stage and extent of the research base was prepared. Finally, a recommendation was made on whether there was potential for appraisal and evidence-based review of the topic (i.e., as a NZHTA Technical Brief or Systematic Review).

OVERVIEW OF FINDINGS

Lists of Abstracts

A small number of papers was identified (n=223). Of these, 38 publications were with abstracts that were relevant to the topic area.

Of these 38 abstracts, one was a protocol for a Cochrane review (Bruinvels et al. 2007). Fourteen articles were deemed to be of potential interest from consideration of their abstracts and were retrieved as full text (see under section "Summary of Key Research" for details). They are 13 primary/secondary studies and one guideline.

Six articles selected from the abstracts and retrieved fully were deemed not relevant to the topic when the full text was examined and thus were excluded.

In addition, a variety of studies were identified as being of peripheral interest but the settings or focus of the study was not directly relevant. These included a number of studies that focused on specific populations such as individuals with cancer including children with cancer and their parents, and women with breast cancer. One other defined the objective as to explore the efficacy of group psychotherapy for eliminating adjustment disorder symptoms of college freshmen. These have been summarised based on the abstract.

SUMMARY OF KEY RESEARCH

Protocol for a Cochrane review. (Bruinvels et al. 2007). *Return to work interventions for adjustment disorders* (Cochrane Protocol first published online January 2007). This Cochrane review protocol identified two objectives: To evaluate the efficacy of interventions aimed at return to work for workers with adjustment disorders and to investigate the impact of groups of different types of interventions. (Bruinvels et al. 2007)

Clinical Guidelines and Standards

DUTCH PRACTICE GUIDELINES FOR MANAGING ADJUSTMENT DISORDERS IN OCCUPATIONAL AND PRIMARY HEALTH CARE (van der Klink and van Dijk 2003)

Target population:

The guidelines target occupational health physicians and general practitioners.

Health care settings:

It covers the care provided by occupational health physicians and general practitioners who see and manage patients with adjustment disorders in an early phase.

The Dutch guidelines classified adjustment disorders for occupational and primary health care populations into: Distress, Nervous breakdown, and Burnout. The guidelines were based on an activating approach and incorporate process evaluation.

Results

Intervention

Search for evidence

- A Medline search on work related adjustment disorders failed to identify any controlled intervention studies. However, 50 controlled studies of preventive, or stress management, programmes were identified. These were mostly aimed at preventing problems with performance, sickness absence, or permanent work disability.
- The conclusion of several qualitative and quantitative reviews (refs 1, 14-16 in the article) was that stress management interventions are effective in reducing the negative aspects of stress. One of these (ref 14 in the article), a recent meta-analysis, concluded that cognitive behavioural and multimodal (cognitive behavioural interventions combined with relaxation techniques) interventions appear to be the most effective.
- Relaxation techniques also proved to be effective, although less than the programs with a cognitive approach.
- In terms of outcome variables, the meta-analysis (ref 14 in the article) showed that cognitive behavioural intervention can improve perceived quality of worklife, enhance psychological resources and responses, and reduce symptoms. In terms of psychological outcomes, relaxation techniques, whether pure or embedded in a multimodal programme, appear to be effective.
- No randomised controlled studies were found that evaluated the therapy or guidance of employees with burnout, but several controlled studies evaluated intervention among a working population with a burnout measure as the dependent variable (refs 17-25). However, none of the studies concerned patients diagnosed with burnout. Cognitive programmes appeared to be the most effective.
- A search of Medline and Psychinfo for prognostic studies of adjustment disorder did not detect any studies published in peer-reviewed journals.

Search for approaches

- A search of Medline, Psychinfo, and the USA National Guidelines Clearinghouse for guidelines on the diagnosis and therapy of adjustment disorders identified a few publications with an unclear status. They were either written by a single author, or the development procedure was not clarified.
- The lack of well-designed studies indicated that there is no high-level evidence for any type of intervention for work-related adjustment disorders.
- Practice-based or consensus-based guidelines have not been published, however, there are sound arguments that therapy needs to be supportive, active, flexible, and goal-directed and it should work within a time-limited context (refs 32-34). Therapy should use encouragement, support the patients' strengths, and minimise or play down past problems. Education and information play an important role.
- Cognitive-behavioural intervention, based on cognitive restructuring, has proved effective in both preventive programmes (refs 14, 16 in the article) and curative programmes (ref 37 in the article). The same is true for stress inoculation training (ref 38 in the article). A graded activity approach based on time contingency has proved effective with patients with low back pain (refs 39, 40 in the article). Early efforts to help the patient regain function appear to be effective (ref 28 in the article). These principles have been applied in the Dutch guidelines for the diagnosis and treatment of adjustment disorders (refs 6, 7 in the article).

Three-phase model, a basic scheme for the guidelines

In the guidelines, regaining control and resuming earlier activities are regarded as active processes in which three phases can be distinguished. The first phase is dominated by the crisis. Patients are often "out of joint" or disorganised. Regaining control in this phase means understanding what has happened and coping emotionally with it. In the second phase, patients have to gain insight into the stressors that contributed to their distress and into possible solutions. The acquisition of skills can be part of this phase. In the third phase, the solutions and skills that have been acquired have to be applied and put into practice in the social and occupational roles that patients have dropped. This model is based on experience gained with patients with successful recovery. Occupational health physicians and general practitioners have two roles to fulfil. They must monitor the recovery process, by ascertaining that patients fulfil the recovery tasks, and they must intervene when necessary. Who performs which role depends, among other things, on whether a patient's problem is mainly work-related or not.

Interventions elaborated in the guidelines

The aim of all interventions is to enable patients to complete the recovery tasks and to increase their problem-solving capacity.

- Although assignments are given, it is important that patients do not receive a prescription defining how they should solve their problems, because such a prescription would encourage dependence rather than independence and discourage an active approach by the patient.
- Intervention in the crisis and understanding phase aims at supporting the acquisition of insight and the acceptance of what has happened. The elements of intervention should include education about stress, stress responses and adjustment disorders; provision of a rationale, positive re-labelling, and a schedule for various nondemanding activities. These interventions can help the patient regain control at a cognitive and emotional level. Providing patients with adjustment disorders with a rationale for the problems they experience is a powerful form of intervention, especially when given as a metaphor. (A balance metaphor shows that there should be equilibrium between the load to bear and a person's ability to bear the load). When this equilibrium is disturbed either the load should be – temporarily - reduced (such as fewer work hours, fewer other obligations, some problems solved, effective time management) or the ability to bear should be increased (a rationale, problem-solving attitude, effective relaxation, physical training, mobilisation of social support, enlargement of decision latitude).

Monitoring the process and relapse prevention

The analysis of cases in which stress responses have become chronic shows that often little is done to correct or adjust a patient's progress. In many instances patients are encouraged to rest and are given comforting counselling as guidance. The Dutch guidelines provide an active monitoring strategy for the regular evaluation of the recovery process in order to prevent cases from becoming chronic. The evaluation criteria are based on the three phases described in the preceding text. There are four evaluation moments scheduled for the evaluation and its criteria for the tasks to be accomplished in the three phases of recovery (presented in Table 3 in the paper): First recovery phase (crisis and understanding) in which the tasks to accomplish are rest, insight and acceptance, the evaluation time would be at the end of phase 1. The patient in this evaluation time has a rationale for the situation or accepts one and has a problem-oriented attitude; preoccupation in thinking shifts from consequences such as symptoms to causes such as problems and stressors. Second recovery phase (insight) in which the tasks to accomplish are defining the problem and making an inventory of stressor, the evaluation time would be halfway through phase 2 and then at the end of phase 2. The patient in the second evaluation time has a problem-solving attitude and is open to the suggestion to make an inventory of possible solutions. The patient in the third evaluation time has an application-oriented attitude and is open to the suggestion to apply strategies and to build up demanding activities. Third recovery phase (rehabilitation) in which the tasks to accomplish are working out strategies and rehabilitation, the evaluation time would be at the end of phase 3. In this evaluation time the roles that have been dropped during the crisis are (at least partially) resumed. The following points to be considered regarding the evaluation criteria:

- Persons diagnosed with a nervous breakdown, these evaluation moments fall at 3-week intervals. The timing of the evaluation moments is not absolute but, instead, serves to warn professionals that recovery may be slow and that a patient may be at risk of developing a chronic problem. (refer to the article for more details (van der Klink and van Dijk 2003)).
- The same above scheme can be applied to the work situation, and, in such a situation, management and supervisors may play a decisive role. Tasks include identifying the problem, developing a solution to the problem, and applying the solution. Occupational health physicians, occupational health nurses, psychologists, or social workers can coach management and colleagues in this process.
- Relapse prevention is an important aspect of therapy and aims at safeguarding the results of the recovery and learning processes. It is also important to prevent a downward spiral if patients relapse. Occupational health physicians or general practitioners involved should check whether patients recognise early signals (feelings, mood, cognition, behaviour) and whether the (work) environment also recognises these signals. They should also ensure that patients are sufficiently aware of which situations, attitudes, and cognitions play a role in the development of adjustment disorders. They should also attempt to determine how patients and the (work) environment will react if signals or situations return.

There is little published research that evaluates the effectiveness of intervention for work-related adjustment disorders with methodological rigor. The evidence for these guidelines is based on only one randomised clinical trial (van der Klink et al. 2003). This trial, which had a protocol similar to the guidelines described above, proved to be highly effective in the prevention of long-term sickness absence and in relapse prevention.

Concluding comments from the article are:

The relatively mild diagnosis "adjustment disorder" has far-reaching disabling consequences for those suffering from it in The Netherlands and other countries. Current occupational health and general practice approaches are often not successful in preventing the consequences of these disorders. Evidence-based methods are available in related fields. The guidelines discussed in this article were developed in a consensus procedure, and they are based on evidence where possible, on good practice experience, and on existing approaches with proved effectiveness in related fields. Given the paucity of high-level evidence in this area and the complexity of the issue, some choices were predominantly based on consensus; other solutions may also be possible and potentially effective. The acceptance of the guidelines is high among professionals, but their actual use is in the implementation phase. The

guidelines appear to be effective when physicians are trained in their use, but further evaluation is needed. We recommend an exchange of methods and good practices to support professionals and to challenge researchers to conduct more evaluation studies.

Primary and secondary studies (listed from recent publication year/alphabetically)

Refer to the attached Information Package for these articles in full text

The primary aim of the randomised controlled trial by Gillham et al was to evaluate the effectiveness of the Penn Resiliency Programme (PRP) as a depression prevention programme when delivered by therapists in a primary care setting over two years of follow-up (Gillham et al. 2006). Two-hundred and seventy-one children aged 11-12 years were randomised to either PRP or usual care. Thirteen percent were diagnosed as adjustment disorder with depressed mood. PRP is a manualised depression prevention curriculum designed for groups of 10 to 14-year-olds. Groups meet for 12 90-minute lessons. The curriculum is based on cognitive-behavioural theories of depression (more details are provided in the paper). Authors mentioned that 'the relatively low incidence of adjustment disorders precluded meaningful analyses of the diagnosis alone'. Therefore the authors examined the intervention effect on depressive disorders and on all combined depression- and anxiety-related disorders assessed. PRP's effect on a broader range of depression-and anxiety-related disorders (depression, anxiety, and adjustment disorders combined) was moderated by initial symptom level. A significant preventive effect was found among high-, but not low-, symptom participants.

In a double-blind, multicenter, parallel-group study Musselman et al compared the efficacy and safety of paroxetine (n=13), and desipramine (n=11) with those of placebo (n=11) for 6 weeks in the treatment of depressive disorders in outpatient adult women with stages I-IV breast cancer and DSM-III-R major depression or adjustment disorder with depressed mood (Musselman et al. 2006). The study authors concluded that the small number of women in this study most likely contributed to the lack of observed differences in efficacy observed during the 6 weeks of treatment. Randomised, placebo-controlled trials of adequate power seeking to determine efficacy of antidepressants in the United States for the treatment of women with breast cancer and co-morbid depression remain of paramount importance.

Nguyen et al (Nguyen et al. 2006a; Nguyen et al. 2006b) reported on the results of a prospective randomised double-blind controlled study in general practice about the efficacy of etifoxine (a non-benzodiazepine anxiolytic drug) and lorazepam (a benzodiazepine) for out-patients diagnosed with adjustment disorder with anxiety (ADWA). The study involved 189 patients, of whom 93 took etifoxine and 96 took lorazepam for 28 days. Study authors concluded that etifoxine was at least as effective on anxiety as lorazepam at usual doses for 1 month. Moreover, after one month of treatment, a significantly higher percentage of etifoxine recipients experienced a marked decrease in anxiety without side effects. With regards to the efficacy results and the lower incidence of anxiety rebound after the end of the treatment compared to lorazepam, these results suggest that etifoxine could be an alternative therapy to benzodiazepines for ADWA. Further studies should be carried out to confirm these benefits both on clinical signs of anxiety and social adjustment, and on safety, at longer term.

An observational study by Pasquini et al primarily aimed to test the feasibility of a multiphasic screening project for the detection and treatment of mood and anxiety disorders among cancer patients in an Oncology Division (Pasquini et al. 2006). One hundred sixty-five patients were diagnosed with solid tumours, the majority of which were colon, breast, and lung cancers. Adjustment disorders were identified in 20 patients (4 with depressed mood, 3 with anxious mood, and 13 mixed), depressive disorders in 14, and anxiety disorders in three patients. All but one patient with adjustment disorder was treated with psychopharmacological interventions (mitrazepine, citalopram, escitalopram, and fluvoxamine and paroxetine). The study was not an effectiveness study but suggested that including psychiatric expertise in an oncology division is feasible and may lead to improved detection and treatment of psychiatric disorders among cancer patients.

Woelk et al (2006) in a randomised double-blind placebo-controlled trial randomly assigned 25 patients who fulfilled the diagnostic criteria for adjustment disorder with anxious mood (ADWAM) and 82 patients with generalised anxiety disorder (GAD) to either 480 mg Ginkgo biloba special extract (EGb 761), 240 mg EGb 761, or placebo for 4 weeks (Woelk et al. 2007). The study showed EGb761 has a specific anxiolytic effect; changes were significantly different from placebo for both treatment groups

and regression analyses revealed a dose-response trend. EGb 761 was significantly superior to placebo on all secondary outcome measures. It was safe and well tolerated and may thus be of particular value in elderly patients with anxiety related to cognitive decline.

A literature review on adjustment disorder and diagnostic pitfalls article by Gur et al highlighted the high prevalence of AD and emphasised its significant morbidity and mortality in everyday practice (Gur et al. 2005). The findings from the review noted the diagnostic difficulties due to the lack of clearly defined operational criteria based on symptoms, and also on difficulties in quantification, and the inherent relationship of the diagnosis to an aetiology. Their resolution requires a two-stage approach, first the reliability of the diagnosis needs to be improved. The authors indicated that they are conducting a retrospective study aimed at determining the diagnostic process used for the identification of AD. The second stage, which depends on the success of the first one, is to perform well-controlled studies of the treatment of AD.

A retrospective review by Hameed et al (Hameed et al. 2005) was carried out to determine the effectiveness of newer antidepressants (mostly SSRIs) in the treatment of major depressive disorder (63 patients) and adjustment disorders (33 patients) in the primary care setting (Hameed et al. 2005). No single antidepressant was found to be more effective than another agent in treating adjustment disorder. Combining antidepressants did not improve response or remission rates over monotherapy, and the addition of psychotherapy to pharmacotherapy did not improve response or remission rates over pharmacotherapy alone during a 4-month period in either group. The study also found that patients with adjustment disorder experienced sustained response rates approximately 70% of the time, which is double the rate of response compared to the major depression group. Absence of dysthymia was the best predictor of patient remission rates in the full major depression group, as dysthymic patients were less likely to achieve full remission of symptoms compared to other members of the cohort.

Levitas & Hurley 2005 reviewed two cases of adjustment disorder in people with intellectual disability (ID) (Levitas and Hurley 2005). For people with ID, they are most likely underdiagnosed and underappreciated. First, mild emotional and behavioural responses to a stressor may be unrecognised because the person with ID cannot label them response verbal as the result of a stressor. Individuals with ID may be unable to connect their emotional and behavioural reactions to the stressor itself or may show unusual reactions and little insight or ability to describe the stressor. Secondly, the responses may be labelled as a "behaviour" problem or may present as an increase in the frequency and intensity of a pre-existing behavioural aberration. Thirdly, if brought for a psychiatric evaluation, the clinician will most likely default to diagnosing a major mental illness because the patient cannot verbalise the link of his or her reaction as a response to a stressor. Two problems result. People with ID are not brought for treatment in a timely fashion when it might help their problem considerably. Secondly, without this recognition, the source of the stress is never addressed. The majority of life situations that are causing stress for people with intellectual disability can either be ameliorated, changed, or the person's natural support system could provide modifying emotional support. It is critical that this concept be discussed and publicised through developmental disability agency support systems.

A single-blind randomised controlled trial on thirty patients by Maina et al involved only two patients diagnosed with adjustment disorder with depressed mood (Maina et al. 2005). The study aimed to determine whether brief dynamic therapy (BDT) is more effective than brief supportive psychotherapy (BSP) and waiting list condition in the treatment of minor depressive disorders. The primary objective of BDT is to enhance the patient's insight about repetitive conflicts (intrapsychic and interpersonal) and trauma that underlie and sustain the patient's problems. The objective of supportive therapy is to improve the patient's immediate adaptation to his/her life situation. Patients treated with both psychotherapeutic approaches showed a significant improvement after treatment in comparison to non-treated controls, but BDT was more effective at follow-up (6month) evaluation suggesting it was more effective in improving the long-term outcome of depressive disorders.

Mitrazapine (nor-adrenergic and specific serotonergic antidepressant) was tested in a 6-month open-label study in 78 patients meeting DSM-IV criteria for major depression or adjustment disorder with depressed mood or with mixed anxiety and depressed mood (Saiz-Ruiz et al. 2005). The study concluded that mitrazapine was an effective and well-tolerated treatment and possibly had a lower incidence of sexual side effects than other antidepressants.

Shimizu et al (Shimizu et al. 2005) published the results of their assessment of the usefulness of the Nurse-Assisted Screening Psychiatric Referral Program (NASPRP) in facilitating the psychiatric management of major depression and adjustment disorder in clinical oncology settings as compared to usual practice. The program has two stages. In the first stage, consecutive patients newly admitted to the Oncology/Haematology Unit are administered the Distress and Impact Thermometer (DIT) by nurses as a brief screening tool for major depression and adjustment disorders. In the second stage, the nurses recommend psychiatric referral to patients with scores above the cut-off point. Patients record were reviewed for a 3-month period before the start of the program and during the 3-month period after the start of the program. A larger portion of the target population was screened by the DIT, and major depression and adjustment disorders were identified in cancer patients. Psychiatric treatment was provided as appropriate. The NASPRP enabled identification of major depression and adjustment disorders in patients with cancer and introduced them to psychiatric treatment. Nevertheless, the authors suggested that there is room for improvement in the program.

In a prospective study Pelkonen and Marttunen compared referred outpatient adolescents with depressive syndrome with psychiatric controls in terms of background characteristics and previous use of psychiatric services (Pelkonen and Marttunen 2005). The study also compared major depression (MDD) ($n=35$), other depressive disorders (OD) ($n=71$) and adjustment disorder with depressed mood (ADD) ($n=40$) in terms of psychopathology, psychosocial impairment and treatment received in a sample of 302 consecutively referred adolescent outpatients. Treatment non-adherence was the highest among the adjustment disorder group. Patients with ADD were less likely than MDD to have individual psychotherapy (at least weekly therapy sessions by a trained psychotherapist) and a recommendation for psychiatric hospital. All the depressed patients receiving psychotropic medication had additional psychosocial treatments. The proportion of patients receiving psychotropic medication/antidepressant medication was lowest in the ADD group. Psychosocial functioning improved in all three groups whether their treatment involved only psychotherapeutic treatments or additional psychotropic medication.

Dowrick et al found that when managing adults with depressive disorders in the community, problem solving treatment was more acceptable than a course on prevention of depression (Dowrick et al. 2000). The study included 452 participants aged between 18 and 65 years identified from a community survey with depressive or adjustment disorders from nine urban and rural communities in five European countries. The multicentre randomised controlled trial was stratified by centre, and compared three groups (two interventions and one control). The first group ($n=128$) was six individual sessions of problem solving treatment, the second group ($n=108$) involved eight group sessions of the course on prevention of depression and the third group was a control group ($n=189$). Outcome measures include completion rates for each intervention, diagnosis of depression, and depressive symptoms and subjective function.

Summaries of Abstracts:

Refer to printout of abstracts in the attached Information Package- listed articles are highlighted in the printout

Casey P (2006). Although a common diagnosis, adjustment disorder has received little scientific attention, and instead the focus has been on major depression. It is likely that adjustment disorder and major depression have been conflated and the reasons for this are explored. Delineating one from the other clearly has a crucial therapeutic and financial implications (40 references)(Casey 2006).

Deng et al (2004). A retrospective control study to explore the efficacy of group psychotherapy for eliminating adjustment disorder symptoms of college freshmen (Deng et al. 2004). Main outcome measures were changes of mental health and self-worth following treatment.

Mufson et al (2004). To assess the effectiveness of interpersonal psychotherapy modified for depressed adolescents compared with treatment as usual in school-based mental health clinics. One of the diagnoses included was adjustment disorder with depressed mood (Mufson et al. 2004).

Powell and McCone 2004. Described the application of cognitive behavioural therapy in the treatment of a 20-year-old white male manifesting an adjustment disorder with anxiety, who initially presented on September 11, 2001 (Powell and McCone 2004).

Sostaric and Sprah (2004) presented a review on a variety of psychosocial interventions and illustrated methods that are used in psycho-oncology (Sostaric and Sprah 2004).

Gonzalez-Jaimes and Turnbull-Plaza (2003) proposed a new therapeutic technique (mirror therapy) to compare with other therapies in treating patients with adjustment disorder with depressed mood as a consequence of acute myocardial infarction (Gonzalez-Jaimes and Turnbull-Plaza 2003).

Linden (2003) presented a case vignette and diagnostic criteria for the 'post-traumatic embitterment disorder' as a new concept for a subgroup of adjustment disorders (Linden 2003).

Matthey et al (2003) looked at the rates of post-partum experience of psychological difficulties among men and women including acute adjustment disorder with anxiety (Matthey et al. 2003).

Nieuwenhuijsen et al (2003) assessed the quality of occupational rehabilitation for patients with adjustment disorders and determined whether high quality of care is related to a shorter period of sickness absence (Nieuwenhuijsen et al. 2003).

Sampang (2003) did not have an abstract but the title includes a review of diagnosis and treatment of adjustment disorder with depressed mood (Sampang 2003).

Van der Klink et al (2003) compared an innovative activating intervention with "care as usual" (control group) for the guidance of employees on sickness leave because of an adjustment disorder (van der Klink et al. 2003).

Simeon et al (2002) conducted a retrospective chart review to obtain data on the potential effectiveness and tolerability of risperidone in children and adolescents presenting with a variety of chronic and severe psychiatric disorders who had been unresponsive to previous pharmacological treatments (only one child was diagnosed with adjustment disorder) (Simeon et al. 2002).

Zarghani and Khalilian (2002) in their prospective descriptive study showed that sixty-two percent of cases of self-burning had an impulsive suicidal intention. Ninety-five percent had a psychiatric diagnosis (mostly of adjustment disorder). They concluded that high prevalence of self-burning in the young population, the pattern of demographic factors, their motivations and high prevalence of adjustment disorders highlights the need for preventive measures, which should be focused on family structure (Zarghani and Khalilian 2002).

Alciati et al (2001) assessed the prevalence of current mood disorders in HIV-seropositive patients treated with combined antiretroviral drug therapy including protease inhibitors. Four percent of the sample was diagnosed with current mood disorder (2.2% adjustment disorder with depressed mood). Direct and indirect effect of new combination therapies, epidemiological changes in social groups affected by HIV and possible modifications in social perception of people with HIV infection may explain at least in part the decreased prevalence of current mood disorders observed in the study as compared to prevalence rates reported in the pre-HAART era (Alciati et al. 2001).

Angelino and Treisman (2001) presented a brief review of studies of antidepressant pharmacotherapy in cancer patients, a treatment algorithm for antidepressant therapy, and suggestions for treatment of demoralization (also known as adjustment disorder), (Angelino and Treisman 2001).

A review by Wagstaff et al (2001) investigated the use of the antidepressant trianeptine (25-50mg per day) in patients with major depression, depressed bipolar disorder, dysthymia or adjustment disorder. (Wagstaff et al. 2001)

Allen (2000) presented a case study on a brief cognitive-behavioural intervention for a 10-year-old child who presented in a clinical setting with adjustment disorder. The outcome as reported by the client and her carer, together with clear behavioural indicators, attested to positive effects of therapy (Allen 2000).

Papers retrieved fully but excluded or deemed not relevant to this report

Papers included for your interest as the last section of the attached Information Package

Darwish et al (2006). The Community Intensive Therapy Team: Development and philosophy of a new service (Darwish et al. 2006).

Feldman et al. (2006). Do Patient Requests for antidepressants enhance or hinder physicians' evaluation of depression? *A randomised controlled trial* (Feldman et al. 2006)

McCracken et al. (2006). Health service use by adults with depression: community survey in five European countries. Evidence from the ODIN study (McCracken et al. 2006).

Puig et al (2006). The efficacy of creative arts therapies to enhance emotional expression, spirituality, and psychological well-being of newly diagnosed Stage I and Stage II breast cancer patients: A preliminary study (Puig et al. 2006).

Dew et al (2005). Adequacy of antidepressant treatment by psychiatric residents: The antidepressant treatment history form as a possible assessment tool (Dew et al. 2005).

Snyder et al. (2005). Psychological adjustment in adolescents with craniofacial anomalies: A comparison of parent and self-reports (Snyder et al. 2005)

CONCLUDING COMMENTS

Research base and stage

Following an extensive, systematic search of the published research and consideration of various website resources, it appears that although adjustment disorder is common there is a significant lack of research studies that compare the efficacy of different treatment options for adjustment disorders. This may be attributed to the lack of specificity in the diagnosis itself, or the variability in the types of stressors involved in adjustment disorder.

Potential for TechBrief or Systematic Review

Due to the lack of effective studies, there is a need for more robust studies to assess the effectiveness of treatment options for adjustment disorders. Until such robust studies are published, there is no potential for a TechBrief or systematic review to be carried out on adjustment disorder.

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