Adjustment disorder with anxiety.
Assessment, treatment and follow up: a case report

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ABSTRACT
This case report describes the evaluation process and therapeutic intervention of a 19 year-old woman with adjustment disorder. The change of city of residence and transition from high school to university generated high levels of anxiety, especially when under social and evaluative situations. The treatment was structured in 12 weekly sessions. The therapy was focused on thought observation training, modification of anxious anticipations and elimination of attention and interpretive biases, by means of cognitive restructuring. Physiological deactivation techniques (progressive relaxation training, abdominal breathing, imagination and suggestion of relaxing situations), problem solving strategies and exposure techniques (imaginary and real) were put into practice in order to help the patient cope with the anxiety generating situations that were being avoided. At post treatment we observed a clear improvement, including a decrease in physiological activation, absence of avoidance behaviour and a significant decrease in the number of anxious anticipations. Pre and post treatment data are presented, as well as the 3 and 6 months follow-up results. The effectiveness of the intervention is analyzed and discussed.

Key Words: anxiety, adjustment disorder, evaluation, treatment, case report.

INTRODUCTION
Adjustment disorders (APA, 2000) seem to be frequent, however the epidemiologic pattern varies widely according to the sample studied. Adjustment disorders are characterized by maladjustment reactions which may arise with emotional and/or behavioural symptoms developed in response to one or more identifiable stressors. The emotional symptoms are sometimes of an anxious type and are produced as a consequence of psychosocial stressful agents such as emigration (Avargues and Orellana, 2008; Delgado, 2008; Pereda, Actis and de Prada, 2008; Salaberría, de Corral, Sánchez, Larrea, 2008) or divorce (Yánoz, Guerra, Comino, Plazaola and Biurrum, 2008). In this case, the symptoms of anxiety may give rise to the so-called adjustment disorder with anxiety, which does not meet the criteria of an anxiety disorder.

Patient identification
Nineteen-year-old J. M. is the eldest of three siblings. She comes from a small provincial town close to Madrid, where she is living now as she is a university freshman there.

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Analyzing the reason for consultation
The patient went to the doctor as a result of the high scores obtained in the Inventario de Situaciones y Respuestas de Ansiedad, ISRA (an anxiety situation and response inventory), (Miguel Tobal and Cano Vindel, 2002) carried out in an undergraduate practical course and then implemented two months later within a Post-Graduate practical course at the Complutense University in Madrid. Although time had passed since the patient’s first assessment, her anxiety symptoms had not subsided. She reported feeling anxiety which is generally a trait of her character but her problem had increased considerably since her move to Madrid. She was collaborative but anxious during the examination and showed great interest in receiving psychological attention to solve her anxiety difficulties in the academic context (González, Donolo, and Rinaudo, 2009) and in the social context (Zubeidat, Salinas and Sierra, 2009).

History of the problem
As for the outset of the problem, the patient stated she had always been nervous and shy but had never seen herself worse than during this academic year. Up to now, J. M. had always lived in her hometown, a small village in Extremadura. As she herself pointed out, she had quite a negative self-image and she defined herself as being insecure and found it difficult to make decisions.

J. M. entered university and changed residency in October, settling in Madrid. As the date for moving approached, she got increasingly anxious in face of the
big change in her life, as she would stop living with her family in her village and share a flat with classmates; in addition to this, was the change from high school to university.

Her academic performance was clearly poorer than her usual one at high school. In her first term at university she failed all her subjects, which was the first time she recorded failures in her academic career.

**Assessment**

Interviews and self reports provided information about the origin and continuation of the problem behaviour. The data obtained from an autobiographical questionnaire indicated that the patient’s general state of health was normal and she had not suffered from any significant health problems. She satisfactorily valued her family and social relationships and, interestingly enough, regarded her sister as her best friend. Furthermore, her social relationships in Madrid were more restricted than in her hometown, as they were reduced to the academic setting (González, Donolo and Rinaudo, 2009).

Her scores obtained in the *Inventario de Situaciones y Respuestas de Ansiedad*, ISRA (an anxiety situation and response inventory), (Miguel Tobal and Cano Vindel, 2002) placed the patient within the rank of severe anxiety, with a percentile score of 80 in total anxiety or measure of general trait. As for her response profile, her cognitive and physiological reactivity stand out, with scores of 85 and 80 respectively, versus the percentile of 60 reached at the motor level.

As regards situational areas, the patient showed severe levels of interpersonal, phobic and everyday anxiety, with percentile scores of 90, 80 and 85, respectively. In assessment situations, her score was slightly lower (percentile 70). She stated she did not use to show much anxiety in exams; however, her current scores in this situation show high anxiety levels (average score of 3.66 out of 4). High scores also stand out in interpersonal situations of the ISRA (‘If someone of the other sex is very near me, brushing against me,’ or ‘If I am in an intimate sexual situation,’ or ‘When I have to attend a social event and meet new people.’)

The data from this test which refer to anxiety manifestations support and coincide with her answers in the biographical questionnaire and with those from the interviews.

Anxiety was noticed during the interview when referring to travelling by the public means of transport she used (bus) as well as a fear of flying, a fear that had not been specified initially. Throughout the treatment, no priority was given to her fear of flying due to the patient’s personal decision. She did not change her mind in spite of being asked many times and so this aspect was not tackled, as it was the patient’s specific wish, since she did not see it being useful in her case.

Worry, anticipation and other anxious feelings were also noticed in situations such as talking in class, getting together with classmates, or in face of examinations.

**Analyzing and describing the behavioural problems**

The main behavioural problems were:

1. High anxiety levels, especially at the cognitive level, in face of any assessment situation, principally university exams, or in face of interpersonal situations, especially with her classmates.
2. Anticipating very negative results about her exam performance, undervaluing her own resources and her daily work, an example being ‘I am going to fail because it is a multiple choice exam.”
3. Important reduction in her academic performance from the time she entered university.
4. Too many anxiogenic anticipations related to her hometown accent when initiating a conversation or when speaking in public.
5. High anxiety levels, especially high physiological activation, manifested by symptoms such as perspiration, uneasiness, palpitations, feeling of breathlessness, when using public means of transport. Furthermore, she reported an excessive fear to flying even though she stated she did not need to travel in this means of transport.
6. Frequent avoidance behaviour shown when speaking in public and during social interaction, and a decrease in the probability of using her social abilities, principally to initiate conversations, express criticism or saying no.

The anxiety shown by the patient, especially in face of social and assessment situations, is associated with the change in her city of residence. (Avargues and Orellana, 2008; Delgado, 2008; Pereda, Actis and de Prada, 2008; Salaberria, de Corral, Sánchez, Larrea, 2008) and to the change from high school to university encouraging the outset of anxious feelings in face of some everyday situations (she spent a good part of the day on this type of thought —attentional bias—which are catastrophist thoughts—interpretive bias).

In agreement with the cognitive model, as a consequence of these dysfunctional and automatic thoughts, the patient experiences an increase in her physiological activation which also brings about a higher frequency and seriousness of the previous erroneous feelings. Such an anxiety response becomes important, as a cycle is established where the anxious response feeds back on itself.

The stimulus situations related to the fact of being assessed, i.e., exams or social situations, operate as discriminating stimuli and increase the possibility of a negative assessment of the consequences of the situation and of her personal resources to cope with the demands facing her. This results in interpreting the situation as a threat, with a strong interpretive bias (Eysenck and Eysenck, 2007); all in all, it results in a high physiological activation which brings about more ill being, and, usually, avoidance behaviour.

The lack of social abilities underlying the patient’s avoidance behaviour, which in fact relieves her anxiety symptoms, appears together with a feeling of failure and so leads to a detriment of perceived self-efficiency to handle these situations, which may become generalized towards lesser self-esteem. This might favour a negative appraisal of her ability to cope satisfactorily with social and assessment situations which might increase her anxiety in the face of these situations.

After integrating the information collected during the assessment phase, we verified that the patient met the criteria described to diagnose her with adjustment disorder with anxiety, 309.24 in the DSM-IV-TR and F43.28 in the CIE-10 (American Psychiatric Association, 2001; World Health Organization, 1992).

**Establishing treatment objectives**

A general objective was established, namely to reduce the anxiety levels in its three response systems in face of the aforementioned situations, principally interpersonal and assessment situations. To do that, we set out the following specific objectives:

52
1. Identify and fight against anticipatory thoughts referring to examinations and other anxiogenic situations and substitute them by other more adaptive ones.
2. Manage for J. M. to regard social and assessment situations as less threatening.
4. Diminish physiological activation responses through relaxation techniques.
5. Eliminate her avoidance responses, such as speaking in public or using public transport.
6. Favour a gradual exposition to situations with adequate anxiety levels.
7. Modify erroneous thoughts about her hometown accent.
8. Increase and improve social abilities.
9. Go out with her classmates.
10. Learn and improve study skills.

Selecting and applying the most appropriate techniques

Starting from a functional analysis of the behavioural problems, as well as the objectives that had been set out, a treatment programme was established with special emphasis on the cognitive restructuring technique (Dongil-Collado, 2008) about anxious anticipations by training to observe thoughts, to eliminate attentional and interpretive biases and to turn interpretations of threat into challenges (all of this in order to deal with specific objectives 1-3 and 7). This cognitive intervention was completed by training in problem solving techniques, which addressed specific objective 8 (D’Zurilla and Goldfried, 1971).

Furthermore, the intervention process was complemented by other pertinent techniques. Thus, in order to deal with specific objective 4, the patient was trained in physiological deactivation techniques such as Jacobson’s progressive muscle relaxation, breathing, in the imagination and suggestion of relaxing situations and in the exposition to imaginary and real situations in order to encourage coping with some situations which used to be felt as anxiogenic and so were avoided (specific objectives 6 and 9). Finally the patient was trained in specific social abilities (specific objective 8) and study skills (specific objective 10) in order to introduce effective and adequate habits to cope with an examination with adjusted anxiety levels.

All in all, the treatment was based on techniques which were able to provide the patient with strategies to adequately perceive and interpret anxiogenic or stressful situations and to cope with them more security and less physiological activation.

The first sessions (See Table 1) were devoted to assessment and adjustment of the patient’s expectations to treatment. The data collected was used to explain the variables that affected the problem. Due to the patient’s high levels of psychophysiological activation, training in relaxation started as early as session 2 by means of (1) diaphragmatic breathing; (2) progressive muscle relaxation (Jacobson, 1929) in the abbreviated version developed by Wolpe in 1958, and (3) imagination and suggestion (Calvo, Betancort and Díaz, 2009).

During the third session the assessment was completed and the patient was informed about what an anxiety response consisted of, as well as its manifestations and consequences. Such information was the first step in carrying out the cognitive restructuring technique, which was done by combining the procedures proposed by Ellis (1977) Beck, Rush, Shaw and Emery (1979), and more recent contributions to this field (Leal-Carcedo and Cano-Vindel, 2008). All through the treatment we insisted on explaining the relationship among thought, emotion and behaviour, as well as for the existence of attentional and interpretive cognitive biases which trigger anxiety reactions (Eysenck and Derakshan, 1997; Eysenck and Eysenck, 2007).

<table>
<thead>
<tr>
<th>Session</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Exploring reasons for consultation. Establishing the therapeutic relationship.</td>
</tr>
<tr>
<td>5</td>
<td>Cognitive restructuring of interpersonal situations and assessment. Exploring the fear of flying behaviour. Phase-3 Progressive Muscle Relaxation training</td>
</tr>
<tr>
<td>8</td>
<td>Problem solving techniques and revising homework. Training in Progressive Muscle Relaxation with Suggestions</td>
</tr>
<tr>
<td>9</td>
<td>Social skills training (Assertivity).</td>
</tr>
<tr>
<td>10</td>
<td>Social skills training (Giving and receiving criticism).</td>
</tr>
<tr>
<td>11</td>
<td>Study skills and study habits.</td>
</tr>
</tbody>
</table>

Table 1. Treatment plan

An important part of the cognitive restructuring carried out was the use of self-reports to identify thoughts and so learn to establish the relationship between thoughts and anxiety. Furthermore, we explained the way our cognitive schemes influence our way of interpreting and analyzing the world, making us resistant to its possible modification. In order to facilitate the patient’s correction of interpretive biases, they were very often analyzed, which provided more realistic and less anxiogenic alternative interpretations. Equally, she was taught to elaborate positive thoughts to diminish psychological ill-being and to contrast them with the reality, all of which to encourage a more adaptive emotional state.

In order to reduce the attentional bias, we measured the frequency and percentage of the time spent on anxiogenic thoughts and indicated the need to reduce their importance and to eliminate a great part of the attention paid to them (Gutiérrez Calvo and García González, 1999), changing the focus of attention (Ramos-Cejudo and Cano-Vindel, 2008).
Furthermore, we used other techniques of a cognitive kind, such as training in problem solving (D’Zurilla and Goldfried, 1971), which was especially emphasized due to her important lack of decision taking ability. Once the technique had been explained, practical cases in her everyday life were put into practice.

Training in social abilities was addressed to those situations that the patient had reported difficulties in. Thus, expressing criticism, initiating conversations and responding assertively were focused on. After the corresponding explanation, the patient was asked to provide an example of a real situation that she would find difficulties in, with the aim of working on it during behavioural sessions (Caballos, 2002).

In order to make it possible for the patient to take examinations with adaptive levels of anxiety, she was trained in relaxation and study skills.

In addition to these techniques, we implemented imaginary and real programmed exposition in the face of anxiogenic situations, such as saying no to some demands, travelling in public transport, going out with her class mates, or speaking in public in her class, etc. All of these expositions were carried out by means of homework tasks and developed in accordance with the treatment plan described in Table 1, which points to the contents addressed in each of the 12 sessions.

Findings and assessment of the effectiveness of the treatment

When we quantitatively valued the changes obtained after 12 treatment sessions, we noticed that each one of the anxiety levels valued by the I.S.R.A. had decreased at the end of treatment in all three response systems, cognitive, physiological and motor (See Table 2).

<table>
<thead>
<tr>
<th>Pre-treatment</th>
<th>Post-treatment</th>
<th>Three month follow up</th>
<th>Six month follow up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw score</td>
<td>Percentile score</td>
<td>Raw score</td>
<td>Percentile score</td>
</tr>
<tr>
<td>Cognitive</td>
<td>109</td>
<td>85</td>
<td>70</td>
</tr>
<tr>
<td>Physiological</td>
<td>57</td>
<td>80</td>
<td>51</td>
</tr>
<tr>
<td>Motor</td>
<td>46</td>
<td>60</td>
<td>41</td>
</tr>
<tr>
<td>Total</td>
<td>212</td>
<td>80</td>
<td>162</td>
</tr>
<tr>
<td>Assessment</td>
<td>85</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>37</td>
<td>90</td>
<td>22</td>
</tr>
<tr>
<td>Phobic</td>
<td>53</td>
<td>80</td>
<td>44</td>
</tr>
<tr>
<td>Everyday</td>
<td>26</td>
<td>85</td>
<td>9</td>
</tr>
</tbody>
</table>

Table 2. Results of the assessment in pre-treatment, post-treatment and in the two follow-up sessions

It can be noticed that the most significant decrease in scores was the cognitive level, which diminished from percentile 85 to percentile 55 (See Figure 1).

As regards data related to the interview, there was a big drop in avoidance behaviours in face of situations which used to be threatening or anxiogenic. After the treatment, the patient was able to travel everywhere by any means of transport, except by plane, which was not worked on. She was also able to meet new people and to relate socially without any concerns related to her accent. The improvement generalized to the academic field, as the patient passed all the subjects in the second term of her freshman year. It is worth stating that the treatment took place between February, when she failed all her subjects, and June, when she was able to pass them all.

After the twelfth session the patient was discharged not only because the school year had ended and she had to go back home, but especially because the therapeutic objectives had been achieved; in summary the treatment started with a percentile 80 (severe anxiety) in the general level of anxiety and ended in percentile 60 (moderate anxiety). This therapeutic improvement kept increasing in the two follow-up visits which took place. As a matter of fact, in the first follow up she obtained a percentile score of 50 and in the second 45. In percentage terms, general anxiety direct scores reduced 40.1% between the pre-treatment assessment and the second follow up (See Table 3), reaching a final value of 127 points which corresponds to 45 percentile in the general population scales (percentile 5 with those of the clinical population).

Follow up

An interview was held three months after the treatment when some maintenance guidelines were given, indicating that she should keep to the strategies acquired during the treatment.

The continuation of the results were confirmed, even showing a new drop in the three response systems. There was a new drop in F-I (Assessment anxiety) and in F-II (interpersonal anxiety) of 5 and 15 percentiles respectively. However she showed a level in F-III anxiety (phobic anxiety) equal to the one in the post-treatment, coinciding with the persistent concern about planes and
the absence of treatment for this problem. Nevertheless, she maintained a lower score than in the pre-treatment levels.

In September the patient was able to pass all the subjects she had failed in the first term, before the start of treatment.

She was more relaxed and became less anxious when she met new people. Thus, she attended an extra summer course in which she did not know anyone but was able to mix with her classmates adequately.

<table>
<thead>
<tr>
<th>Pre - post</th>
<th>Raw score</th>
<th>%</th>
<th>Raw score</th>
<th>%</th>
<th>Pre-3 month follow-up</th>
<th>Raw score</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive</td>
<td>39</td>
<td>35,8</td>
<td>48</td>
<td>44,0</td>
<td>45</td>
<td>41,3</td>
<td></td>
</tr>
<tr>
<td>Physiological</td>
<td>6</td>
<td>10,5</td>
<td>20</td>
<td>35,1</td>
<td>27</td>
<td>47,4</td>
<td></td>
</tr>
<tr>
<td>Motor</td>
<td>5</td>
<td>10,9</td>
<td>7</td>
<td>15,2</td>
<td>13</td>
<td>28,3</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>23,6</td>
<td>75</td>
<td>35,4</td>
<td>85</td>
<td>40,1</td>
<td></td>
</tr>
<tr>
<td>Assessment</td>
<td>15</td>
<td>17,6</td>
<td>21</td>
<td>24,7</td>
<td>28</td>
<td>32,9</td>
<td></td>
</tr>
<tr>
<td>Interpersonal</td>
<td>15</td>
<td>40,5</td>
<td>22</td>
<td>39,5</td>
<td>28</td>
<td>75,7</td>
<td></td>
</tr>
<tr>
<td>Phobic</td>
<td>9</td>
<td>17,0</td>
<td>10</td>
<td>18,9</td>
<td>5</td>
<td>9,4</td>
<td></td>
</tr>
<tr>
<td>Everyday</td>
<td>17</td>
<td>65,4</td>
<td>16</td>
<td>61,5</td>
<td>18</td>
<td>69,2</td>
<td></td>
</tr>
</tbody>
</table>

Table 3. Therapeutic gains at the end of treatment and in the two follow up sessions.

Six months later, a follow-up session was carried out by means of an interview and assessment with the ISRA (an anxiety situation and response inventory). A slight increase of cognitive anxiety was noticed which was not found alarming, as J. M. was still in the examination period. Yet, she did show a drop in physiological and motor levels. The patient stated that she retook breathing and relaxation techniques in the exam periods as she felt better and more clearheaded.

In the situational areas, the patient showed a new and slight decrease in Assessment Anxiety and Anxiety in Daily Life, which were at normal anxiety levels. The most significant data is the big drop in F-II (interpersonal anxiety), which reached low anxiety levels (percentile 30). However, there was a slight increase (from percentile 70 to 75) in her phobic anxiety, which included the fear of flying situation.

The patient reported having a new group of girl-friends in her Faculty and now she preferred Multiple Choice tests, which she used to fear. Her academic performance increased a good deal and she managed to pass all the four-month subjects in the first term in her second year of studies. The fact that she did fail an optional subject was not due to anxiety problems.

DISCUSSION

Both the DSM-IV (APA, 2001) and the (CIE-10) (WHO) state that diagnosing adjustment disorder is framed within the assessment of the following variables: form, content and seriousness of symptoms; background and personality, and everyday events or situations. In spite of the efforts to provide specific criteria, clinical practice shows that adjustment disorder has always been a controversial issue, as it still has a vague and residual diagnosis. However, there had been no doubt in assigning this patient to this diagnostic category, given the stressful circumstances, the emotional reaction, the linking of events and the time length involved.

Casey, Dowrick and Wilkinson (2001) hold that two ambiguous aspects define the diagnosis of adjustment disorder. First, they draw attention to the vague differences between and among its manifestations and the expected reactions to the adjustment. The second controversy lies in the diagnosis overlapping other disorders. We believe, however, that the case we have reported provided very precise data in the issues pointed out by these authors.

Scientific literature insists that the treatment of adjustment disorders needs to be basically founded on the psychotherapeutic measures that make it possible to reduce the assessment of threat and the strength of stressors, to boost coping with the stressful agent that cannot be reduced or eliminated, and to establish a support system to achieve the best possible adjustment (Hales and Yudofsky, 2000; Wood, 2008). We have followed these lines and the findings of this study have been those expected by these authors.

In the present case, as can be seen, in the initial period of no treatment, there were no significant changes in reported psychological ill-being. However, after twelve sessions of treatment guided by a cognitive theoretical model (Eysenck and Eysenck, 2007) with empirical support and techniques based on scientific evidence, the patient progressively acquired precise abilities to manage her thoughts properly, reduce cognitive biases and anxiety responses, and successfully cope with feared situations at the lowest discomfort level. Other achievements were the acquisition of self-control abilities for physiological activation and behaviours to cope with any situations that had been previously feared, except for fear for flying, which J. M. refused to deal with.

In the light of the findings, cognitive behavioural therapy proves to be effective both by the pre-treatment and post-treatment differences registered in the questionnaires and by the behavioural changes observed during the interviews. On the other hand, this work shows the typical limitations of AB designs with follow up (Vidal-Fernández, Ramos-Cejudo and Cano-Vindel, 2008), whose level of proof is considered to be the lowest by Cochrane Foundation.

We have not been able to control the effect of outside variables that may have affected the treatment, such as examination epochs or the passage of time, etc; however, the findings and conclusions of this case are in tune with those obtained by more rigorous studies on the effectiveness of these techniques (Butler, Chapman, Forman and Beck, 2006).
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