Review article/*Artykuł poglądowy*

Compliance in anxiety disorders

Problem współpracy w leczeniu chorych z zaburzeniami lękowymi

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Abstract

Anxiety disorders are a serious problem in both psychiatric practice and research, affecting about 20% of the general population. This paper highlights the problem of interactions between quality of treatment compliance and the course of anxiety disorders, as well as the outcomes of therapy.

There is a general scarcity of data concerning compliance in anxiety disorders, and coherence of the available evidence is not a rule. Everyday clinical experience suggests that compliance among patients with anxiety disorders is generally satisfactory (the validity of this statement is supported by the results of some trials), but some data indicate that up to 50% of patients belonging to this group are at risk of treatment drop-out. Drop-out rates are higher among people receiving psychotherapy in outpatient settings than among inpatients. Published evidence indicates that the quality of compliance is positively correlated with the outcomes of cognitive-behavioural therapy of panic disorder; the analogous data regarding obsessive-compulsive disorder, social anxiety disorder and generalized anxiety disorder are unclear. Various authors advocate psychoeducation (regardless of the type of disorder) as the best way of enhancing compliance, as 'knowledge is an important factor in change'.

Compliance with antidepressant treatment seems to be unsatisfactory. Side effects are the most frequent reason for discontinuing or switching antidepressants. Patients with comorbid depressive disorders seem to be more compliant with pharmacotherapy.

Key words: anxiety disorders, compliance, psychotherapy, pharmacotherapy.

Streszczenie

Zaburzenia lękowe są istotnym problemem zarówno w psychiatrycznej praktyce klinicznej, jak i w badaniach naukowych. Występują one u ok. 20% osób w populacji ogólnej. Autorzy niniejszej pracy przedstawiają zagadnienie relacji między jakością współpracy w leczeniu a przebiegiem zaburzeń lękowych oraz wynikami terapii osób cierpiących z ich powodu.

Opublikowano bardzo niewiele danych dotyczących współpracy w leczeniu chorych z zaburzeniami lękowymi, a dostępne informacje nie zawsze są spójne. Wprawdzie doświadczenie kliniczne podpowiada, że jakość współpracy w terapii osób należących do omawianej grupy jest zwykle zadowalająca (a opinia ta znajduje potwierdzenie w wynikach niektórych badań), ale rezultaty niektórych analiz wskazują, iż ryzyko przedwczesnej rezygnacji z leczenia może dotyczyć nawet 50% chorych z zaburzeniami lękowymi. Wskaźniki rezygnacji z leczenia są większe wśród osób korzystających z psychoterapii w trybie ambulatoryjnym niż w ramach hospitalizacji. Dostępne przesłanki świadczą o tym, że jakość współpracy w leczeniu dodatnio koreluje z wynikami terapii poznawczo-behawioralnej stosowanej u chorych z zaburzeniem panicznym. Analogiczne dane dotyczące leczenia zaburzenia obsesyjno-kompulsyjnego, zespołu lęku społecznego lub zaburzenia lękowego uogólnionego są niejednoznaczne. Wielu autorów zaleca stosowanie psychoedukacji (niezależnie od rodzaju zaburzenia lękowego) jako najlepszej metody poprawiania jakości współpracy w leczeniu, gdyż „wiedza jest istotnym czynnikiem zmiany".

Jakość współpracy w leczeniu odnośnie do stosowania leków przeciwdepresyjnych jest raczej niezadowalająca. Występowanie działań niepożądanych jest najczęstszą przyczyną rezygnacji z przyjmowania tych związków lub zmiany leków w tej grupie. Wydaje się, że chorzy ze współistniejącymi zaburzeniami depresyjnymi lepiej współpracują w leczeniu farmakologicznym.

Słowa kluczowe: zaburzenia lękowe, współpraca w leczeniu, psychoterapia, farmakoterapia.

Introduction

Anxiety disorders are a serious problem in both psychiatric practice and research. According to the recent epidemiological data, as many as about 20% of the general population may be affected by this group of psychiatric disorders (Leray *et al*. 2011). Furthermore, high rates of comorbidity between anxiety disorders and other psychiatric or medical problems is a rule rather than the exception (Jaeschke *et al*. 2010). Given these facts, it would be justified to say that this group of disorders should be seen as one of the most significant issues in contemporary psychiatry.

This paper highlights the problem of interactions between quality of compliance and the course of anxiety disorders, as well as the treatment outcomes.

Non-compliance among psychiatric patients – general considerations

Both epidemiological and clinical data suggest that various forms of non-compliance are among the major (if not the most important) obstacles to success in psychiatric treatment. According to the review of the literature performed by Issakidis and Andrews, 16–23% of patients who receive over a year long therapy of mental disorders terminate treatment early. Furthermore, pre-treatment attrition (i.e. attrition that occurs before the beginning of the study (Hofmann 1998) seems to be a huge problem too. Data gathered by the cited authors hint that 30–50% of patients scheduled for treatment either fail to commence or do not complete treatment (Issakidis and Andrews 2004).

According to Hummer's and Fleischhacker's proposal, the reasons for non-compliance can be divided into four groups. At least some of those factors are modifiable.

The first group comprises patient-related factors. Patients can be reluctant to adhere to the treatment because of the psychopathology of the anxiety disorder itself. For example, high trait anxiety may lead to so-called 'passive non-compliance' – namely forgetting about the medicines and irregular intake of them. Being anxious of stigmatization and rejection, as well as various dysfunctional beliefs about the disorder and its treatment ('taking drugs is a weakness', 'drugs can be addictive', 'by taking drugs I'm not myself anymore'…), might further increase the risk of non-compliance. Age can also be an important confounder. Worse compliance among elderly patients with anxiety disorders can be implied by impaired memory or co-existing medical illnesses, requiring intake of numerous drugs. Finally, comorbid psychiatric disorders – especially substance abuse – might increase the rate of non-compliance. Such compounds as alcohol or benzodiazepines can be used by the patients as measures of 'self-treatment'.

The second group consists of environmental or social factors. Patients' families' negative attitude towards treatment, familial conflicts or difficult economic situation increase the risk of non-compliance. On the other hand, such features as effective social support networks and lasting intimate relationships facilitate compliance and adherence to treatment.

The third group consists of physician-related factors. The 'technical approach' towards the patient presented by the physician and the healthcare professional's lack of engagement in the relationship may become a real obstacle that decreases rates of compliance. However, the patient's belief that the physician is interested in him or her as 'a human being who happened to be a patient', as well as the doctor's established conviction of effectiveness of the concrete therapy, are all factors that improve compliance.

The final group of factors consists of features of the treatment itself. Side effects, difficulties with dosage and way of drug application, length of treatment and using large amounts of drugs at the same time are all elements that impede following the physician's instructions. Of note, severe side effects seem to be – along with male gender and younger age – risk factors of discontinuation only during the initial five weeks of treatment. They do not seem to influence compliance in the further course of therapy. There are no data suggesting that compliance rates of some drugs are significantly different from compliance rates of others (Hummer and Fleischhacker 1999).

One of the most important factors influencing compliance rates in psychiatry is the fact that psychiatric patients miss their appointments almost twice as frequently as patients seeking help for somatic reasons. According to data gathered by the UK Department of Health, in 2002–2003, 19.1% of psychiatry out-patients appointments were missed, while the overall UK figure was only 11.7% (Depart-

ment of Health, 2003). Key social and clinical predictors of non-attendance (summarized by Alex J. Mitchell and Thomas Selmes) are presented in Table 1. In their review, Mitchell and Selmes have also collated a set of measures to reduce the scale of this problem. The latter list can be found in Table 2.

How compliant are patients with anxiety disorders?

Data on the compliance rate among patients with anxiety disorders are relatively scarce and – at times – contradictory. Issakidis and Andrews argue that up to 50% of patients belonging to this group are at risk of the most severe form of non-compliance, namely a failure to commence or complete treatment (Issakidis and Andrews 2004).

More optimistic conclusions derive from the study performed by Koivumaa-Honkanen *et al.*, who analysed various aspects of life satisfaction and course of treatment among patients with schizophrenia, major depression or anxiety disorders. The authors divided compliance into three dimensions, covering medication adherence, as well as attending appointments and on-call visits. In the group of anxiety disorders, the medication compliance rate was 61.9%, appointment compliance was as high as 97.8%, and on-call visit compliance was the worst (11.5%) (Koivumaa-Honkanen *et al*. 1999). Those results seem to be in accordance with everyday clinical experience, suggesting that compliance among patients with anxiety disorders is mostly satisfactory. Given the fact that symptoms related to this group of psychiatric disorders both cause significant distress and are

Table 1. Key predictors of non-attendance among psychiatric patients (from Mitchell and Selmes 2007)

Environmental and demographic factors: younger age, lower socio-economic status, not having health insurance (where healthcare is not free at point of delivery), poor adherence to psychotropic medications, homelessness, transport problems, distance from clinic
Patient factors: forgetting, oversleeping, getting the date wrong, being too psychiatrically unwell, high trait anxiety, lower social desirability scores, dismissing attachment styles
Memory/cognitive problems: dementia
Illness factors: personality disorder, substance misuse (alone or in combination with other psychiatric disorder), neurotic disorders, diagnosis unclear or cannot be established
Clinician and referrer factors: poor communication between the referring practitioner and the patient, patient's disagreement with the referral, referrer's scepticism about the value of psychiatry, poor-quality referral letter, longer delay between the referral and the appointment (or between assessment and treatment), early stages of treatment, quality of therapeutic alliance, non-collaborative decision-making

Table 2. Simple measures to reduce non-attendance among psychiatric patients (from Mitchell and Selmes 2007)

Improving initial attendance	Improving follow-up attendance	Response to missed appointments
• Encourage referrers to explain the purpose of the referral. • Schedule the appointment as soon as possible. • Write to the patient with clear directions and explaining the mechanism of referral. • Offer the option of an afternoon appointment. • Offer the option of a community/home visit if the patient is too unwell to attend. • Consider a reminder telephone call the day before the appointment (if the patient has a telephone).	• Give the patient a choice of appointment dates and/or locations. • Schedule the appointment as soon as possible. • Where possible, agree the duration of the treatment course at the start. • Work towards establishing and maintaining a good therapeutic relationship. • Involve the patient in treatment decisions.	• Contact the patient by letter or telephone. • Identify any patient-cited barriers to attending. • Confirm that the patient wishes to attend. • Affirm that the patient can still be seen without prejudice. • If possible convey hope that there is a definite prospect of improvement. • Reschedule the missed appointment as soon as possible.

not burdened with social stigma, patients with anxiety disorders are keen on searching for professional help.

The study by Issakidis and Andrews (performed in Australia) gives us an important insight into sociodemographic and clinical characteristics of patients who were reluctant to join and/or continue therapy.

In general, 68.7% out of 731 patients with anxiety disorders who were offered treatment actually entered therapy and 61.6% completed the therapeutic cycle. The pre-treatment attrition (i.e. active refusal and non-contact with the clinic after initial assessment) rate was 30.4%. The most common 'source' of attrition was non-attendance at pre-treatment interview, or failure to re-contact the clinic to schedule the treatment (17.8%). Active therapy refusal was a little bit rarer (12.6%). On the other hand, once patients commenced therapy, dropouts were uncommon (10.3%).

One of the significant predictors of pre-treatment attrition was primary diagnosis, especially among patients with depression or other comorbidities. Furthermore, the more severe the depression, the greater the attrition risk was observed (this highlights the importance of an in-depth assessment of depressive symptoms among individuals with anxiety disorders). It should be stressed that severity of anxiety symptoms does not seem to be related to the pre-treatment attrition risk.

Given anxiety disorders only, the greatest risk of attrition was noted among people with agoraphobia (39.8%), followed by generalized anxiety disorder (GAD) (34.0%), social anxiety disorder (SAD) (30.4%) and panic disorder (PD) (27.9%). Nevertheless, the differences between disorders were statistically insignificant. Interestingly enough, presence of at least one child was positively associated with probability of treatment attrition. But if we take into account the fact that this relationship was significant only among women, it does not seem to be strange anymore (in most societies of European descent it is still true that women are more preoccupied with taking care of children than men, so they are less likely to turn attention to their own health at the cost of time spent with the offspring). This risk-gender relationship was the strongest among patients with agoraphobia, but at the same time the proportion of women was the highest in this same group (77.4%).

People who reported milder disorder-specific symptoms, as well as those patients who were experiencing higher levels of physical impairment, were of higher risk of dropping out of treatment. It is possible that people who experience less impairment, as well as those individuals who have benefited from the early stages of therapy, may resign from the treatment early.

Of note, demographic, clinical and systemic factors had a rather weak influence on the risk of pre-treatment attrition and dropout. It would be interesting to emphasize that people who were referred by a general practitioner were less devoted to therapy than those individuals who were advised to join the treatment by a mental health specialist.

The study by Issakidis and Andrews gives further evidence that anxiety disorder therapy delivered in a specialist clinic is burdened with lower dropout risk than psychotherapy provided in an outpatient setting (as shown by comparison with the results of the meta-analysis performed by Wierzbicki and Pekarik (1993). The hypothesis that 'the time-limited, structured, evidence-based nature of treatments delivered in specialist clinics contributes to low dropout rates in these settings' (Issakidis and Andrews 2004) has been supported by several authors. For example, Sledge *et al*. reported that people with anxiety and depressive disorders who received an outpatient treatment were less likely to give up therapy prematurely when provided with time-limited psychotherapy compared with psychotherapy without a set time limit (Sledge *et al*. 1990). Wierzbicki and Pekarik suggest that patients' expectations may also contribute to this kind of outcome.

Finally, we should take note of the fact that patients with anxiety disorders were more likely to resign from the group cognitive-behavioural therapy (CBT) rather than from the individual therapeutic sessions. This may be a reflection of the fact that people experiencing anxiety tend to be reluctant to engage in social situations (Issakidis and Andrews 2004).

The key results of the study by Issakidis and Andrews are summarized in Table 3.

Impact of compliance on treatment outcomes in anxiety disorders

There is a general scarcity of research data on the interplay between therapeutic compliance and outcomes of treatment of anxiety disorders. Available sources allow us to assess this relationship only for the two major therapeutic approaches towards the discussed class of psychiatric problems: cognitive-behavioural therapy and pharmacotherapy with antidepressant drugs.

Compliance with cognitive-behavioural therapy

Cognitive behavioural therapy is the basic psychotherapeutic approach to treatment of anxiety disorders (Chodkiewicz and Mniszewska 2006).

One of the most important assumptions of CBT is the thesis that acquisition of new skills and knowledge might exert a therapeutic impact in patients with certain psychiatric disorders (Chojnacka 2009). Those novel competences can be achieved only with the patient's active participation in regard to relevant treatment-related assignments (often called 'homeworks') (Schmidt and Woolaway-Bickel 2000). It means that the quality of the patient's adherence to the therapist's instructions should be (in theory at least) one of the major determinants of the treatment outcome.

Panic disorder

In the case of panic disorder (PD), CBT protocols include acquisition of a number of skills, including cognitive restructuring, interoceptive exposure, breathing control procedures, education, and in vivo therapy techniques (Wolfe and Maser 1994, as cited in Schmidt and Woolaway-Bickel 2000). Although it would be a truism to say that both quantity and quality of homework count, things get more intriguing when we ask whether all the elements of this CBT scheme are equally effective in treatment of PD. But first of all, what does 'quality of homework' mean?

In an attempt to resolve this issues, Schmidt and Wollaway-Bickel adopted the following definitions:

- 'The quantity compliance rating was the percentage of assigned homework that was completed (0–100%).'
- 'The quality compliance rating was based on the overall quality of the work conducted during the previous week (0 = poor, 1 = marginal, 2 = fair, 3 = good, 4 = very good, 5 = excellent). [...] For example, in completing in vivo or interoceptive exposure exercises, we considered five main criteria in evaluating homework quality: a) whether a specific task was identified, b) whether the task generated moderate levels of fear, c) whether the task was repeated until fear was extinguished, d) whether the patient identified any "safety aids" (i.e., coping strategies used to assist them in dealing with their fear during exposure); and e) whether safety aids were successfully faded during practice and, in the case of interoceptive exposure, whether the exercise produced a sufficiently high level of sensation.
- 'We considered four criteria in rating cognitive restructuring exercises: a) whether an anxiogenic cognition was appropriately identified, b) whether the patient evaluated the evidence in support and against this thought, c) whether an appropriate behavioural experiment was developed in response to identification of an unrealistic thought, and d) whether the patient completed the behavioural experiment' (Schmidt and Woolaway-Bickel 2000).

Table 3. Predictors of pre-treatment attrition and dropout of therapy among patients with anxiety disorders (from Issakidis and Andrews 2004, modified)

Predictor variables	OR	95% CI
Pre-treatment attrition		
PD	1.0	–
agoraphobia	1.5	0.9–2.5
SAD	1.1	0.7–1.7
GAD	1.2	0.6–2.4
depression	4.0	1.6–10.0
other disorder	3.6	1.4–8.8
more depressed (DASS depression scale)	1.2	1.0–1.5
at least one child*	1.3	0.9–1.9
offered group vs. individual treatment	3.3	1.6–2.7
referred by a general practitioner vs. mental health specialist	1.6	1.1–2.3
Dropouts		
milder symptoms pre-treatment (disorder specific)	1.8	1.2–2.7
more depressed (DASS depression scale)	2.0	1.4–2.9
more physically disabled (SF-12 physical health scale)	1.6	1.2–2.1
female	2.4	1.1–5.4

**Only significant in interaction with primary diagnosis*
CI – confidence interval, DASS – Depression Anxiety Stress Scales, GAD – generalized anxiety disorder, OR – odds ratio, PD – panic disorder, SAD – social anxiety disorder

In the given research the overall 'quantitative compliance' was moderately high, remaining in the range between 55 and 65%. Quality ratings were increasing over time. Optimistically enough, the outcomes were encouraging. Considering panic attacks, the recovery rate was 94%, in the case of anxiety 83%, and 71% for phobic avoidance. Researchers have noted a sig-

nificant relationship between therapist-rated quality of compliance and clinical improvement. Patient-rated compliance has not been related to the outcome. The striking conclusion of this study seems to be the fact that compliance with particular skills has been associated with changes in related symptom variables. For example, compliance with therapeutic session focused on completing in vivo exposure to a phobic situation was a significant predictor of change in phobic avoidance. Accordingly, compliance with sessions linked to cognitive restructuring led to a decrease in panic frequency and intensity, as well as to a reduction of anticipatory anxiety. Alleviation of fear of bodily sensations was associated with compliance with sessions focused on interoceptive exposure (Schmidt and Woolaway-Bickel 2000).

Obsessive-compulsive disorder

In the case of patients with obsessive-compulsive disorder (OCD), so-called exposure and response (ritual) prevention (EX/RP) is an established therapeutic method (belonging to the arsenal of CBT techniques). The point of this technique is to gain new information and abilities to modify dysfunctional thoughts and behaviours rooted in OCD. Patients undergoing EX/RP receive psychoeducation about OCD and are repeatedly exposed to situations and stimuli that provoke obsessions. They are also taught that breaking the vicious circle of obsessions and compulsion by refraining from compulsive rituals will eventually lead to long-term relief (Abramowitz *et al*. 2002). As this task is difficult for the majority of people with OCD, one can assume that patients' reluctance to perform homework may be the key obstacle in compliance.

Yet again there have been relatively few attempts to determine the relationship between compliance and outcomes of EX/RP. Moreover, the results of the performed studies are inconsistent. According to O'Sullivan *et al*., higher quality of compliance with EX/RP led to a reduction of the severity of rituals at six-year follow-up (O'Sullivan *et al*. 1991), while Lax *et al*. failed to find any relationship between those variables (Lax *et al*. 1992). In a newer study, Abramowitz *et al*. assessed this issue, having singled out four components of compliance (psychoeducation, i.e. understanding the treatment rationale; in-session exposure; homework exposure; and ritual prevention). They concluded that severity of OCD and depressive symptoms (patients with OCD and comorbid conditions were enrolled in the study) were not related to degree of compliance with EX/RP techniques. This finding can be explained by the flexibility of the method discussed (i.e. patients with more severe OCD symptoms were given less difficult tasks). Neither other psychiatric comorbidities (major depressive disorder, bipolar disorder, GAD, SAD or PD) nor pharmacotherapy influenced the quality of adherence. The authors found that various levels of compliance with EX/RP were among the most important factors affecting therapeutic outcomes, responsible for 64% of variance in post-treatment OCD severity. In detailed analysis they proved that 'understanding the rationale for EX/RP, compliance with in-session exposure and compliance with homework exposure were strongly associated with less severe post-treatment OCD symptoms' (Abramowitz *et al*. 2002). Moreover, some interrelationships between individual elements of the EX/RP method were identified. As one might expect, 'Patients who evidenced greater compliance with in-session exposure were also more compliant with homework exposure instructions. Also, patients who better understood the rationale for EX/RP were more compliant with in-session exposure instructions' (Abramowitz *et al*. 2002). This finding emphasizes the importance of psychoeducation. Interestingly enough, the impact of psychoeducation on the treatment outcome can be interpreted in two ways. On one hand, psychoeducation may provide the patient with the insight that makes is easier to cope with the challenges of anxiety-evoking exposures. On the other, as the psychoeducational process progresses through EX/RP, patients who have already undergone in-session exposures 'come to better understand the treatment rationale by the benefit of their own experience with these procedures' (Abramowitz *et al*. 2002).

Nevertheless, the effectiveness of EX/RP technique is far from optimal. Bonchek points out three major difficulties related to this method. First of all, only about half of the patients receiving this form of treatment improve. The rest are burdened with relapses or various forms of non-compliance (dropouts or non-adherence). The second argument explaining frequent dropouts of EX/RP refers to the fact that 'the essence of EX/RP is to have the person confront his compulsion head on' (Bonchek 2009). This strategy might cause an unacceptable level of distress for the patient. The third problem is that the patients undergoing EX/RP are likely to obey the rules of this therapy in the presence of the

therapist rather than 'in the privacy of their homes'. Having considered all these obstacles, Bonchek suggests that a suitable alternative to EX/RP (overcoming the main limitations of this method) is Strategic/Behavioral Treatment. The key assumption of this form of treatment is that the patient's compliance (obtained by – among others – a positive, non-confrontational therapeutic style) is the prerequisite of psychotherapeutic effectiveness. So the first step on the therapeutic path should be to reduce or eliminate the patient's resistance (for details, see Bonchek 2009).

Finally, we must emphasize that not only the type of psychotherapeutic approach but also the pattern of symptoms has an impact on the quality of compliance among patients with OCD (although there are few data on this issue). It is interesting to note that Mataix-Cols *et al*. have shown that for the patients with hoarding symptoms it may be more difficult to comply with treatment. This finding can be interpreted as a result of some specific clinical features of this population: poor insight about their problems, ego-syntonicity of their behaviour, denial, rationalization and low motivation to change (Mataix-Cols *et al*. 2002).

Social anxiety disorder

It seems that one of the most important factors determining the quality of compliance with CBT (or – in a more general sense – therapeutic alliance) among patients with SAD is their difficulty in forming interpersonal relationships. At the same time, it might be a necessary condition implying a chance for therapeutic success. Hayes points out that the distress related to symptoms of social phobia may be strongly involved in the psychotherapeutic setting itself (Hayes 2007).

However, in this group of patients, the relationship between quality of compliance and treatment outcome can be tricky. Although the authors mentioned above confirmed the existence of an interrelation between client-rated (but not observer-rated) therapeutic alliance and session helpfulness (Hayes 2007), the results of other studies are puzzling. Woody and Adessky found that although strength of working alliance increased in the course of therapy, this statement was not related to treatment results (Woody and Adessky 2002). VanDyke showed that in spite of the fact that a strong therapeutic alliance observed during the final CBT session predicted decreased intensity of symptoms at a follow-up, quality of alliance in the course of earlier sessions did not seem to have anything in common with treatment outcome. This encourages an interpretation that these are treatment gains that fuel therapeutic alliance – not the opposite (VanDyke 2002, as cited in Hayes 2007).

Several other aspects of compliance have also been analysed among patients with SAD. There is some evidence that homework compliance is likely to have a positive impact on treatment gains. Good therapeutic alliance also gives better chances for the process of motivational interviewing (in the case of individuals with poor motivation for therapy). Motivational interviewing may enhance the patient's positive expectancy for anxiety relief before treatment. It may also contribute to better compliance with CBT homework and, finally, to a better CBT response (Pontoski 2009).

Generalized anxiety disorder

Huppert and Sanderson advocate psychoeducation as the best way of enhancing compliance among patients with GAD.

The cited authors attribute the paramount importance to psychoeducation because they 'believe that knowledge is an important factor in change'. Many patients presenting with symptoms of GAD have never been informed about the disorder before, and multiple misconceptions about GAD, as well as misunderstandings about physiological or emotional responses to worry, need to be clarified. Providing education about the biopsychosocial model of anxiety may be the initial step of CBT among this group of patients. Awareness of the fact that their highly unpleasant experiences are quite common might bring some relief by itself. In terms of compliance, it seems that the most important aspect of psychoeducation is that it cast a shaft of light on the rationale of therapy. Huppert and Sanderson recommend providing psychoeducation 'in a written form and then followed up in session' (Huppert and Sanderson 2009).

Compliance with pharmacotherapy

To the best of our knowledge, the most comprehensive study on the problem of compliance in relation to pharmacotherapy among patients with anxiety disorders (to date) is the one performed by Stein *et al*., published in 2006. It is no surprise that this publication seems to be the

best of the very few available research findings on this issue.

Stein *et al*. point out that adherence to treatment with selective serotonin reuptake inhibitors (SSRI) or serotonin norepinephrine reuptake inhibitors (SNRI) is one of the major determinants of therapeutic outcome among patients with anxiety disorders. They also assume that (analogically to depressive disorders) non-adherence with medication in this population is associated with substantial economic burden, implied by patients' inability to work, impairment in social functioning and intensive utilization of medical services (Stein 2006).

Having analysed 13 085 patients with various anxiety disorders, the researchers found that about 57% of people of that population were deemed non-adherent at six months follow-up. Interestingly enough, comorbid depressive and anxiety disorders predicted a higher adherence rate (47%) than 'pure' anxiety disorders (40%). Moreover, patients with this pattern of comorbidity were more likely to change their medication (40% vs. 25%) or have their dosage titrated (58% vs. 43%). As in the study by Issakidis and Andrews (see above), Stein *et al*. also noted that patients who were treated by a mental health specialist were more compliant with antidepressant medications than those who were seeking help from other medical specialists (respectively 50% and 44%).

Overall, compliance rates in the given population were low. The authors emphasize that this finding is yet further evidence for the unsatisfactory quality of pharmacotherapy provided to patients with anxiety disorders in primary care (although adherence rates among people receiving treatment tailored by psychiatrists were hardly any better). This is important, as current anxiety disorder treatment guidelines advocate prolonged therapy with SSRIs or SNRIs (Stein 2006). The fact that side effects (mainly drowsiness or fatigue, followed by anxiety, headache and nausea [Bull 2002]) are the most frequent reason for discontinuation or switching SSRIs leads us back to the idea of psychoeducation as a crucial element of virtually all the psychotherapeutic and psychopharmacotherapeutic interventions. Providing the patient with information about late onset of action of SSRIs or SNRIs and possible side effects which might occur during the initial weeks of therapy seems to be the best way to improve compliance (Bandelow and Baldwin 2009). In this sense, disease management programmes targeting (among other problems) the issue of adherence (such as collaborative care programmes for patients with PD) may be beneficial (Stein 2006).

Conclusions

The view arising from the gathered data strongly suggests that there is still much to be done in the field of research on the importance of treatment compliance in anxiety disorders. For the time being there is relatively little evidence strongly advocating the importance of good compliance with regard to the treatment outcomes of anxiety disorders *en bloc*. Preliminary data suggest that patients receiving psychotherapy are more likely to be compliant with treatment, probably due to the time-limited and structured character of therapy delivered in specialist clinics. Furthermore, co-existence of depressive disorders seems to be a positive prognostic factor in terms of compliance (both with psychotherapy and pharmacotherapy with antidepressant drugs).

Probably the most compelling evidence regarding the relationship between compliance and outcomes of psychotherapy are related to CBT used in populations with panic disorder. Furthermore, distinct elements of CBT technique seem to have a different impact on the effectiveness of therapy. Data about OCD, SAD and GAD are much less convincing. Most authors argue that psychoeducation is the best way of strengthening the quality of compliance with the psychotherapy of anxiety disorders.

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