

FEATURES SECTION

Orthognathic treatment: see how they feel?

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As clinicians we are becoming increasingly careful in our pre-treatment screening processes and in acknowledging the importance of psychological assessment of potential orthognathic patients. However, this does not necessarily guarantee post-treatment satisfaction, even if the clinician thinks the clinical outcome is good. This paper provides the clinician with a schematic framework of those factors which may affect post-treatment outcomes.

Key words: Orthognathic treatment, Outcomes, Psychology, Satisfaction

Received 5th April 2008; accepted 7th October 2008

Introduction

The management of orthognathic patients involves a number of important aspects including the clinical examination, use of radiographs and other imaging techniques, study models and photographs and, in many cases, surgical predictions using specialist software such as QuickCeph™ or Dolphin™. Increasingly, clinicians are also acknowledging the value of considering the patient's psychological status and placing it on a par with clinical assessment in terms of importance.¹

The management of patients from a psychological perspective is not a one-off procedure which is undertaken at the initial assessment and can then be forgotten about. It is a continuing process throughout treatment from the very first visit through to the post-debond phase, involving a two-way dialogue between patient and clinician. Some of the methods which are used to obtain information are listed in Table 1 and what is immediately obvious is the importance of communication and building a rapport with the patient. This then raises the question: If we are increasingly careful in our pre-treatment screening processes, why do we still get patients who are unhappy with the outcomes of treatment?

In the initial years of research in this area, the belief was very much that if the outcome was technically good, then the patient would be happy. Gradually it became apparent that this was not the whole story and researchers then worked on the theory that two aspects contributed to patient satisfaction: a technically good result and internal patient ('psychological') factors and this framework was operational for some years.

In this paper, we propose an extension to this framework and suggest that there are four main aspects which contribute to patient satisfaction (Figure 1). There are clearly other contributing issues but we feel these are potentially the four most important influencing factors.

Technically good result

This is one area which, as clinicians, we do have control over. That is not to say that we always achieve perfection but the quality of the result is under our control and also, to some extent, under the patient's control depending on how well they comply with treatment. However, this aspect will not be discussed further as it is not the main subject of this paper.

Internal patient factors

In the cosmetic surgery literature some, but not all, studies have suggested that depression, anxiety, personality disorders and neurosis may be associated with a poorer outcome.^{2–5} Interestingly, two orthognathic studies have also shown that neuroticism is associated with poorer outcome.^{6,7} Neuroticism is one of the 'big five' personality traits (the others being openness, conscientiousness, extraversion and agreeableness) and can be thought of as 'the tendency to experience negative emotions such as sadness, anxiety or guilt'.⁸ Whilst it is recognized that screening for neuroticism *per se* is complex, it seems reasonable to conclude that for patients who exhibit a high degree of distress (sadness, anxiety, etc.), a more detailed mental health

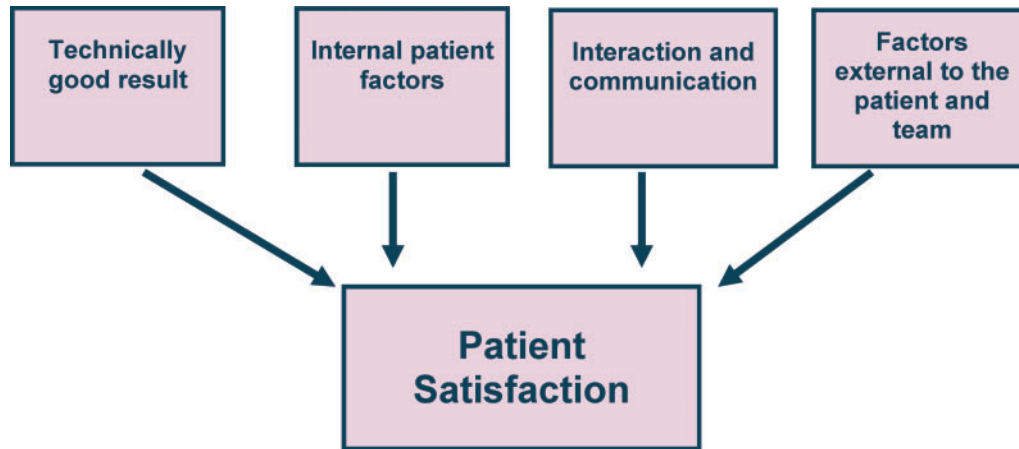


Figure 1 A schematic framework for those factors contributing to patient satisfaction

assessment should be considered prior to any physical intervention.

There has been considerable investigation of the effect of personality traits and mental illnesses on outcomes in cosmetic surgery but ‘only limited rigorous scientific data that help clinicians predict who will fare poorly in psychological terms’.⁹ Similar efforts have been made in the narrower field of orthognathic treatment and for both areas, body dysmorphic disorder (BDD) is consistently associated with a poor outcome.^{9,10}

Body dysmorphic disorder is defined in the Diagnostic and Statistical Manual of Mental Disorders IV¹¹ as a preoccupation with an imagined or minor defect in appearance which causes significant distress in social, occupational and other important areas of functioning, and is not better accounted for by another mental disorder (e.g. anorexia nervosa). This condition is thought to affect both genders equally and many BDD patients are single and socially isolated, with a significant impact on their psychosocial functioning.^{12,13}

The condition usually starts around the age of 12 to 13 years and patients may vividly recall the first time they worried about their appearance.^{13,14} Patients may have one or more targets for their concerns but these may also alter over time. These patients have an intense preoccupation with certain aspects of their appearance and there are characteristic behaviours associated with BDD which are rather like compulsions: for example, inspecting the feature of concern in a mirror, comparing their appearance with other people both in their life and in the media (magazines, television, etc.), and fantasizing about how life could be if their appearance was different.

The prevalence of BDD is not well documented. A large study of the general population in the US showed a prevalence of 1.7%¹ but this may be as high as 20% in the cosmetic surgery population.¹⁶ Interestingly, BDD was also identified in 3 out of 40 (7.5%) new adult orthodontic patients¹⁷ and it seems likely that the prevalence in orthognathic patients is somewhere between the orthodontic and cosmetic surgery patients. The subject is included in this paper due to the potentially serious consequences if it goes undetected, rather than due to its prevalence.

What constitutes a ‘minor defect’ in the definition of BDD is not clear, and this presents orthodontists and surgeons with a difficulty. It is clearly easier to identify BDD in patients with no dentofacial abnormality than in those who have some problem. This difficulty is further complicated by the lack of any prospective studies on BDD patients and treatments which change someone’s appearance.¹⁰ However, clinical experience and retrospective studies suggest that physical treatment alone is contraindicated in patients with BDD¹⁸ and that, if any physical intervention is considered, it should be undertaken in conjunction with a

Table 1 Important elements of patient management

Pre-treatment	<ul style="list-style-type: none"> ● Communication ● Rapport ● Helping with decision making ● Patient concerns ● Why? Why now? ● Expectations
During pre-surgical orthodontics	<ul style="list-style-type: none"> ● Rapport building ● Reinforcing what to expect/ what not to expect
Immediately before and after surgery	<ul style="list-style-type: none"> ● Be available ● Allow patients to ask questions
Post-surgery	<ul style="list-style-type: none"> ● Support ● Contact point ● Frustration/ motivation manager

psychiatrist/psychologist. Psychological treatment of BDD usually involves cognitive behavioural therapy (CBT).¹⁹⁻²¹ Cognitive behavioural therapy is a structured and collaborative form of psychotherapy whose core idea is that thoughts, feelings and behaviour are all connected. Cognitive behavioural therapy aims to give patients more choice by helping them to recognize their own patterns of thinking and feeling, and what realistic alternatives might be open to them. Patients can then learn to exercise these choices to gain better control over their thoughts and behaviour leading to more positive emotions. A diary of BDD-related behaviours can be useful as part of this therapy. Table 2 shows a typical diary which also illustrates the effect that BDD can have on patients' lives. Although, the content of such diaries has not been looked at in a formal research study, the example shows the debilitating effect of this condition and also highlights why orthognathic treatment on its own is unlikely to solve all of these problems.

Not all patients with BDD have the characteristic associated behaviours or admit to being preoccupied with their appearance and, in some circumstances, it is useful to ask a series of questions so that both the clinician and patient can attempt to anticipate the likelihood of dissatisfaction with the procedure. Firstly, the patient is asked to rate their current appearance on a scale from 0 to 10, where 10 is very attractive and 0 very unattractive. Secondly, they are asked what rating they hope to attain after treatment. The patient is then asked what life would be like if they achieved this level of appearance and this should be explored in some detail. The third and final question is to ask the patient how they would feel if the treatment does not go well and they only achieve perhaps a half or one point increase in their subjective appearance rating. The aim is to achieve a shared understanding of how the patient would cope with a result that falls short of their expectations of psychosocial change (as opposed to the actual physical result). Some patients experience a feeling of anger or

extreme frustration when imagining such a scenario and this should suggest to the clinician that physical treatment alone carries a high risk. This form of questioning may also be utilized in other forms of treatment when the clinician is concerned about how realistic a patient's expectations are (for example, adult orthodontic treatment or combined orthodontic-restorative treatment).

Identifying which patients may have BDD is only the first part of the problem; the second issue is to help the patient to access more appropriate treatment. One can think of this as a three stage process of: engagement,¹⁰ broadening the agenda and then referring on to a more appropriate health professional. The first step is to fully explore the patient's concerns and to show the patient that you understand how they feel. The next step is to broaden the discussion from the patient's concerns about appearance to the effect these concerns are having on the rest of his/her life. Once you understand a little about this, the patient should be asked whether they have ever had any help with this distress and suggest that it would be best to refer them to their general medical practitioner (GMP).

In summary, clinicians should be interested in their patients' psychological state, although psychological problems should not necessarily be viewed as a reason to exclude from orthognathic intervention. Clinicians should also be particularly alert to the possibility of BDD, as physical treatment alone has a clearly increased risk of patient dissatisfaction in this cohort of patients.

Interaction and communication

Interaction and communication, both within the orthognathic team and between the team and the patient, are fundamental to achieving optimum patient satisfaction. The literature states that between 92 and 100% of orthognathic patients are satisfied post-operatively.^{7,22-24} However, only a very small percentage of those who are

Table 2 Example of a diary completed by a patient with BDD

	Mon	Tues	Wed	Thurs	Fri
Looking in mirror					
How many times	8	9	8	7	8
How long (total)	1 hr 20 min	40 min	1 hr 20 min	35 min	30 min
Comparing appearance to people in magazines					
How many times	0	1	0	2	2
How long (total)	0	15 min	0 min	30 min	10 min
Thinking about future with improved appearance					
How many times	5	6	2	2	5
How long (total)	1 hr	25 min	10 min	15 min	23 min

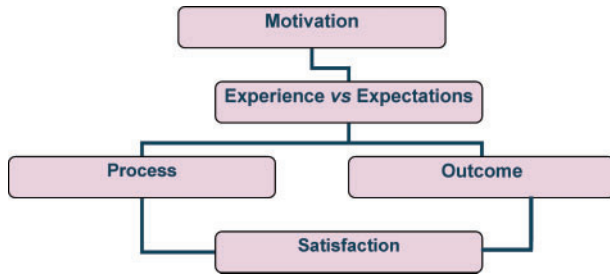


Figure 2 The relationship between motivation, expectations and satisfaction with orthognathic treatment

dissatisfied have psychiatric disorders such as BDD. This means that in the region of 5% are dissatisfied for other reasons. This is usually due to problems in the treatment process rather than the actual outcome and many of these issues stem from poor communication. Cunningham *et al.*²⁴ found that the majority of their respondents were happy with the outcomes of treatment and the majority of respondents also felt that the technical aspects of the operation had been well explained. However, almost a quarter felt that the effects following surgery were badly explained and it was concluded that pre-operative counselling and communication needed to be improved. The last decade has seen obvious improvements in information provision, but this aspect of care remains of fundamental importance.

Any patient requesting orthognathic intervention has certain motivating factors, these may be functional, aesthetic or a combination of the two.²⁵ Associated with these motivating factors, the patient has expectations of both the process and outcome of treatment and it appears to be their experience of the process and outcome, relative to these expectations which influences their ultimate satisfaction (Figure 2). An example which supports this theory is the longitudinal study of 74 orthognathic patients undertaken by Kiyak and colleagues²⁶ which showed that expectations of pain and paraesthesia were the best predictors of post-surgical outcome. The authors stressed the importance of preparing patients against unrealistic expectations if optimum results are to be obtained. Therefore, if we can give sufficient information to ensure that the experience correlates well with expectations (by intervening at the second stage in the flow diagram in Figure 2), it seems likely that patient satisfaction should be optimized. These expectations are not static and they do change during treatment, for example as a result of the extended duration of treatment or due to the interaction between the patient and the team. As a result, this process needs to be revisited at times during treatment to ensure that the patient still has realistic expectations.

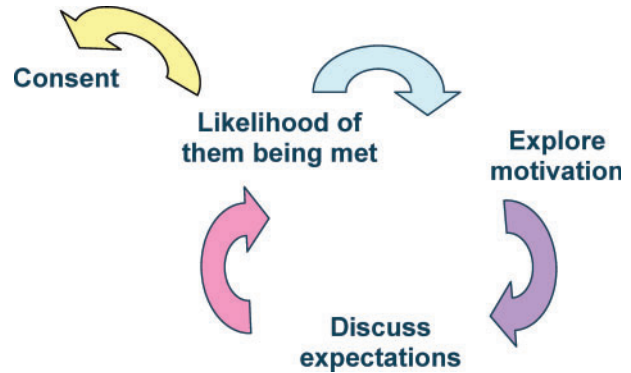


Figure 3 Exploration of motivation and expectations in the informed consent process

This can also be looked at as a cyclical process as shown in Figures 3 and 4. Any consultation should start with exploration of the patient's motivations, progressing on to a discussion of their expectations of treatment. It is then the responsibility of the clinician to explain the likelihood of these expectations being met. Logic may then dictate that consent can be taken prior to starting treatment (Figure 3), but the process is not quite as straightforward as this. The discussion between patient and clinician should have influenced the patient's expectations so the cycle has to start again and the motivations and expectations re-explored. It may take a number of cycles (Figure 4) before the clinician feels that the patient is fully informed and can make an informed decision as to whether or not they wish to proceed with treatment and can give truly informed consent. It is also important to allow the patient

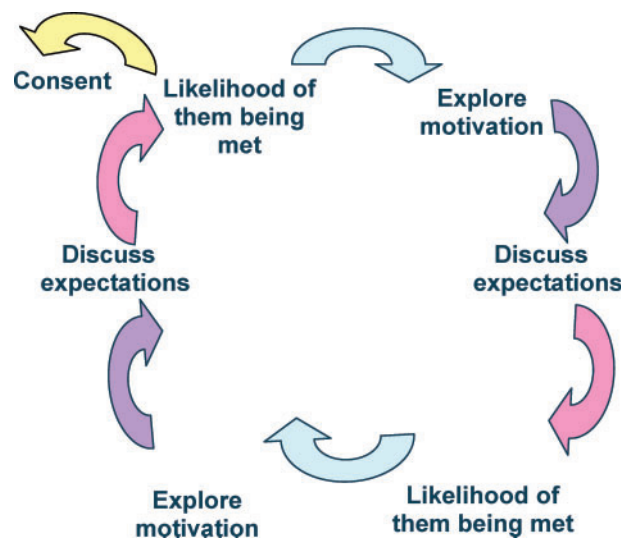


Figure 4 The cyclical process when exploring motivation and expectations

adequate time between visits to allow them to take on-board all that has been said and to ensure they have considered all necessary factors in making their decision whether or not to proceed with treatment. This clearly has implications in the current climate of the 18 week wait. However, it is important that patient care/safety are not dictated by such agendas and clinicians should ensure that the 'clock stops' during this stage and allows the patient adequate time to make the decision as to whether or not they wish to proceed with treatment.

Factors external to the patient and the team

This is one of the most difficult areas to deal with as these issues tend to be outside the control of both the patient and the team. There are a number of aspects which may be considered under this heading but perhaps the most important is the influence of family and friends. There is evidence that those patients who have support from family and friends when making treatment decisions and immediately following surgery are those who tend to be most satisfied post-treatment.^{27,28} Therefore, it seems logical that, if family members or friends could be encouraged to attend certain key appointments with the patient and can be told what to expect and how to help manage the patient, satisfaction levels should be optimized. At the very least, clinicians should ask patients whether they have discussed their treatment with family and friends. Those who have not done so may benefit from more in-depth psychological assessment and support.

What are the implications of this framework?

This framework proposes that there is a great deal more to achieving patient satisfaction than just producing a technically good result and that some of the most important aspects of care are communicating with the patient and showing an interest in them and what they hope to achieve from treatment. It also highlights the importance of being aware of certain complicating factors, such as BDD, and the importance of the team having a care pathway so that they know how to manage a patient about whom they have concerns.

Where do we go from here?

A recent questionnaire survey of UK consultant orthodontists showed that approximately 70% of consultants felt that at least some of their patients would

benefit from referral to a mental health professional. Perhaps, not surprisingly, the main reason for not referring patients was that they had no-one to refer to.²⁹ There are clearly funding issues associated with this but in many situations there are potential solutions, for example, employing a clinical psychologist or liaison psychiatrist for a small number of sessions initially (perhaps one session a week or less) or linking with other specialities in the trust such as Plastic Surgery or Women's Health who frequently work with mental health teams. Issues of clinical governance are paramount, however, and the authors believe that it is no longer acceptable to work in an isolated clinical setup without the appropriate members of the multidisciplinary team. A recent report by the National Institute of Clinical Excellence³⁰ stated that any clinician involved in a specialty where they may see patients suffering from BDD, should have an established referral pathway to a mental health professional experienced in the management of BDD. This is a useful publication to cite in business cases for those units attempting to gain funding for the input of a mental health professional on their orthognathic team.

Other areas of interest

This article is a summary of a presentation given by the authors at the 2007 BOC and is intended only to provide an overview of this topic. The article is not a comprehensive review of the subject but highlights some of the issues related to personality, decision making, perceptions of control, adherence, communication and information provision. Interested readers may wish to explore some of these areas in more detail.

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