

The Psychology of Facial Appearance

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Abstract: Facial attractiveness is now recognized as being important in situations as diverse as education, relationships and employment. An individual's facial appearance is one of their most obvious characteristics and facial disfigurements are judged to be among the least desirable 'handicaps'. A face which deviates from the norm becomes a stigma. This paper looks at the complex area of facial appearance and its importance in the field of dentistry. The relationship between facial attractiveness and varying forms of dental and surgical intervention are discussed, as well as some of the problems which may be encountered during treatment.

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Clinical Relevance: Knowledge of the psychology background to appearance may help the clinician in the treatment of aesthetic problems.

Facial aesthetics has universal importance but is of particular relevance in the field of dentistry. The subject has elicited views since as early as the Egyptian era, when kings were portrayed with perfect facial proportions and lesser nobles were more realistically represented.¹ Opinions regarding the most attractive facial appearance have changed in the intervening years and, even today, this is the subject of much debate.

The face has a profound social significance and any feature which causes an individual to deviate from the norm can be considered a handicap. Deviation may range from something as straightforward as a dental anomaly to a complex craniofacial deformity. In 1969, Aronson² noted:

'it is difficult to be certain why the effects of physical beauty have not

been studied more systematically. It may be that, at some level, we would hate to find evidence that beautiful individuals are better liked—somehow this seems undemocratic.'

However, the last three decades have seen certain advances in our views on facial aesthetics. It is now more acceptable to be concerned about facial attractiveness and it is also more acceptable for an individual to seek cosmetic procedures in an effort to improve aspects of the face which he or she dislikes. This is reflected in the increase in surgical procedures such as orthognathic treatment and also in the increased demand for orthodontics and cosmetic dentistry.

In today's society we tend to be subjected to many more 'one-off' encounters than in the past. This means that people are judged constantly on the basis of their attractiveness, and facial attractiveness in particular. There is considerable evidence to suggest that those who are attractive have certain advantages over less attractive people.

For example, parents expect greater personal and social success from an attractive child than from a less attractive child.³ Teachers, rating unfamiliar children with identical academic achievements, believed attractive children to be more popular with their peers and to be more intelligent.⁴ In job interviews where applicants had identical qualifications, certain personnel decisions were influenced by the attractiveness of the applicant.⁵ Walster *et al.*⁶ constructed a college 'computer dance' and noted that physical attractiveness alone determined how an individual reacted to his/her date: features such as social skills and intelligence did not have an effect. These are just a few examples of the many papers illustrating the advantages of attractiveness.

Much of this early work of the 1970s and early 1980s is now recognized as naïve and simplistic, and it has been said that these studies lacked validity (for example, they used unrealistic still photographs as stimuli rather than more realistic animated images). However, the understanding of the importance of facial appearance in first-time encounters has developed considerably since this early research. It is now understood that, although facial attractiveness is important in the first few minutes of an encounter and influences initial impressions, other qualities (such as social skills and self-esteem) also come into play. For this reason some researchers have recommended social skills training for facially disfigured people in an attempt to counteract the stigma of facial disfigurement. This may involve role

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playing, teaching the skills required to become acceptable as part of a group or communication and assertiveness training.^{7,8} It is also now recognized that factors other than facial attractiveness assume greater importance in longer term relationships.

FACIAL DEFORMITY AND ITS MANAGEMENT

Dentofacial Deformity and Orthodontic Treatment

Individuals are frequently stereotyped based on dental features: someone with a Class II division 1 malocclusion may be considered 'goofy' or stupid whereas those with Class III malocclusions are sometimes perceived as being aggressive. Shaw *et al.*⁹ found that dental features were a significant target for nicknames, harassment and teasing among schoolchildren. In a later paper Shaw¹⁰ studied the influence of certain dentofacial features (e.g. crowded teeth, an increased overjet, a missing tooth) on a child's social attractiveness. The hypothesis that children with normal dental appearance would be judged better looking, more intelligent and more desirable as a friend was upheld.

Macgregor¹¹ and Lansdown *et al.*¹² noted that an individual who has an obvious facial deformity tends to be treated with compassion, whereas those with lesser deformities (for example, a marked overjet) are more likely to be subjected to teasing and ridicule. These individuals may feel a great deal of anxiety in social situations because they are not sure how others will respond to them. This, in turn, can have profound effects on their ability to socialize and develop positive self-esteem. It is presumably due to this that the demand for cosmetic dentistry and orthodontics has increased in recent years. Improved dentofacial appearance is usually the motivating factor for these forms of treatment, ahead of the desire for improved dental health or function.^{10,13}

The effect that malocclusion has on body image and self-esteem remains the subject of some controversy. It is often

assumed that individuals with malocclusions will possess low self-esteem and that intervention will improve this. Albino *et al.*¹⁴ found that parent-, peer- and self-evaluations of dental-facial attractiveness significantly improved following orthodontic treatment but there was no evidence that treatment improved self and parental evaluations of social competency and self-esteem. However, there is a complex relationship between perceptions of attractiveness and self-esteem, which is yet to be fully explained.

It is likely that dental practitioners are far more critical of dentofacial aesthetics than are the general public.¹⁵⁻¹⁷ It is therefore important that treatment is not forced on those patients who do not perceive a problem, as they are unlikely to co-operate. It is also important not to allow parents to dictate treatment for a child. The child's co-operation is required if treatment is to be successful—and, unfortunately, an enthusiastic parent does not always have an enthusiastic and motivated child!

Dentofacial Deformity and Restorative Treatment

Patients who request restorative treatment to improve their appearance have motivating factors similar to those pursuing orthodontic treatment, namely improvement in aesthetics. However, the dentist's perceptions of ideal aesthetics are not always the same as those of the patient. Neumann *et al.*¹⁸ asked patients to complete questionnaires about personal aesthetic satisfaction and oral self-image. Their results showed discrepancies between clinical findings and the patients' self-perception and satisfaction. This reinforces the necessity for clinician and patient to plan together for aesthetic treatment.

This area is further complicated by the fact that there is no aesthetic 'norm' and clinicians therefore have to be guided partly by their professional judgement and partly by what the patient wishes to achieve. The patient's wishes need to be taken into account but the clinician should ascertain that these are

achievable. If not, the patient should be told at the outset if post-treatment dissatisfaction is to be avoided.

Facial Deformity and Surgical Treatment

More severe dentofacial problems or craniofacial malformations may require surgical intervention. Again, one of the primary motivating factors is improvement in aesthetics. Many studies investigating orthognathic patients have found that a desire for aesthetic improvement was a major motivating factor.^{19,20,21} Patients' self-assessments of attractiveness, however, differ from those of professionals. Bell *et al.*²² and Wilmot *et al.*²³ found that self-perceptions of profile were more important than professional recommendations when deciding whether or not to undergo surgery.

The source of motivation is one of the most important factors in patients undergoing orthognathic treatment. Patients who present with long-standing inner feelings about deficiencies in their appearance ('internal motivation') are more likely to have satisfactory treatment outcomes than those patients who seek treatment to please someone else (e.g. a spouse or parent) or because they believe that surgery will make their external environment easier ('external motivation'). The latter group usually require a change in their personal environment before treatment is likely to be successful.

Other patient characteristics may provide some indication of how the patient is likely to react to treatment. Those patients who present with unrealistic expectations of treatment (e.g. expecting a better job, new relationships) are more likely to express dissatisfaction postoperatively. Patients who have only recently become concerned about a certain aspect of their facial features should also alert the clinician. It may be that the patient has experienced recent life events (e.g. death in the family, divorce) and, in such cases, it is better to delay treatment until the acute event has passed as their concern with the feature may be a

transient response.^{24,25} A patient's ability to function in a normal way in everyday life is also a good indicator of surgical satisfaction. Some patients avoid going to places where they will be seen or forced to engage in conversation as they believe that people are staring and laughing at them. This may suggest underlying psychopathology which the clinician should be aware of (see later section regarding body dysmorphic disorder). Any of these features may be associated with dissatisfaction following successful surgery: referral to a liaison psychiatrist, clinical psychologist or psychoanalytical psychotherapist should be considered before any active treatment.

Patients with more severe facial deformities (including patients with clefts of the lip and/or palate or craniofacial syndromes) present with a whole range of additional problems. Improved mental well-being is cited as a major benefit for facial reconstruction in patients with craniofacial malformations and those who support early surgery do so on the grounds that normalization of appearance before the child develops a sense of deformity has major benefits.²⁶ A further important factor in the development of a facially deformed child is the attitude of the parents and family: those who have a positive family background appear to develop higher self-esteem than those with less family support.²⁷

Acquired Facial Deformity

Facial deformities may occur as a result of various injuries, including surgery for head and neck cancer and traumatic injuries due to assault or road traffic accidents.

Patients who experience disfiguring surgery for head and neck cancer are particularly vulnerable to depression, especially in the immediate postoperative phase. Many functions are centred around the head and neck area—eating, drinking, speaking and many forms of non-verbal communication. It is therefore not surprising that adjusting to the dramatic change in facial form and function is

extremely difficult.²⁸ Studies by West²⁹ and Olson and Shedd³⁰ have shown the ability of these patients to adapt to their facial deformity in a wide range of situations including work and social activities. However, loss of facial function and form has massive implications on both the patient and their family. Patients usually feel anxious about leaving hospital and family and friends must be counselled in order to support the individual. All of those involved should share a common goal, to reduce patient distress and improve their quality of life.

It has been realized only recently that facial injuries acquired through trauma (for example, assault or road traffic accidents) may also have psychological effects. Mayou *et al.*³¹ found that 8% of road traffic accident victims were suffering from post-traumatic stress disorder (PTSD) up to one year afterwards. Bisson *et al.*³² administered questionnaires to facial trauma victims at initial assessment and then seven weeks later. At the follow-up visit, 27% of patients were diagnosed as suffering from PTSD as defined in DSM-IV.³³ Therefore, in certain cases care from both maxillofacial surgeons and psychiatrists or psychologists may be necessary.

If surgical management is required to correct an acquired facial deformity, counselling and careful management are necessary. Individuals with acquired deformities tend to be more critical and express greater dissatisfaction postoperatively than those with developmental deformities. Patients with developmental problems have never had an image of 'normality'

(although to some extent they acquire this from the media) whereas those with acquired problems tend to expect to look exactly as they did before the injury; an expectation that is frequently unrealistic.²⁴

ABNORMAL RESPONSES TO FACIAL/DENTOFACIAL DEFORMITY

Of equal importance are those patients who present with abnormal or inappropriate concerns regarding their dental or facial appearance. One group in particular are those individuals suffering from body dysmorphic disorder (BDD), a condition previously known as dysmorphophobia. These individuals present with an imagined or minor defect and a level of concern that is exaggerated out of all proportion (Table 1). They may present to a wide range of clinicians including general dental practitioners, orthodontists, maxillofacial surgeons and plastic surgeons and, because they are seen by a number of different clinicians, this means that sociodemographic data can be difficult to establish. A large percentage of those suffering from the condition present with concerns affecting the head/face area, which stresses the need to be vigilant in patient assessment.³⁴ Patients suffering from BDD develop preoccupations which are distressing and time consuming. For example, they may spend hours thinking about the 'defect', studying it in the mirror or attempting to camouflage it. This can reach such proportions that they become housebound or even attempt suicide. BDD patients require careful assessment at initial appointments and it is important that this is carried out by an experienced clinician who does not risk making matters worse by drawing the patient's attention to other potential 'defects'.

Patients suffering from BDD may be reluctant to discuss their problems at initial consultation, embarrassed by what they perceive to be a dreadful defect. Alternatively, they may be intrusive and present with photographs and diagrams in an attempt to illustrate

1. There is a preoccupation with a defect in the appearance. Either the defect is imagined or, if a defect is present, the individual's concern is excessive.
2. The preoccupation causes significant distress in social, occupational and other important areas of functioning.
3. The preoccupation is not better accounted for by another mental disorder such as anorexia nervosa.

Table 1. The three criteria for diagnosis of Body Dysmorphic Disorder (DSM-IV³³).

the defect. They may also send letters and make numerous phone calls for the same reason. A feature which is frequently noted in patients suffering from BDD is that they have often seen a number of other clinicians, an issue which the individual may conceal if treatment has been refused several times already.

The importance of careful assessment of these individuals cannot be over-emphasized. Many patients have co-existing psychiatric problems such as depression and BDD may also be prodromal for other serious psychiatric disorders. If treatment (e.g. surgery, restorative treatment, orthodontics) is undertaken for no obvious deformity then the patient is unlikely to be satisfied when it is completed and may well change the focus of attention to a new 'defect' in some other part of the face or mouth.³⁵

It is important to recognize such patients at an early stage if inappropriate and potentially damaging treatment is to be avoided. Early detection can be difficult as patients frequently present with a plausible complaint. In addition, these patients are often well educated medically and know the correct terminology. It is then not until treatment has begun that the problem becomes apparent. A clinician who provides treatment under these circumstances is unlikely to be successful as the treatment inevitably becomes patient-directed. It is important that clinicians are not pressured into treating patients against their better judgement; treatment should be provided only where there is clinical justification. There are reports of patients with minimal deformities who have benefited from surgery when treated in conjunction with psychiatric preparation;^{36,37} however, the majority of clinicians support the view that surgical (or dental) intervention is not helpful in the long term.

Management of patients suffering from BDD is extremely difficult. Clinicians must avoid being forced into providing treatment and referral to the patient's GMP or to a liaison psychiatrist/clinical psychologist is a

vital first step: pharmacological treatment^{38,39} or cognitive therapy⁴⁰ are likely to have better outcomes than dental or surgical treatment. Patients are frequently convinced of the physical nature of their complaint and reject any psychological explanation; as a result, they often cease to take medication or fail to complete a course of treatment with a psychologist/psychotherapist.

CONCLUSION

Careful initial assessment is essential if problems such as body dysmorphic disorder are to be detected and managed appropriately. Although this stage is time consuming, it may well prevent problems at a later date. Patients may need to be seen on several occasions before commencing treatment and they should be asked a number of key questions:

- How do they perceive the problem? From the clinician's viewpoint, is this appropriate?
- Why have they chosen to seek treatment now?
- Are there any recent major life events which may have influenced this?
- What do they expect from treatment?
- Is this reasonable?
- What is their motivation to have treatment?
- Are they being pressured into treatment by anyone?

If there is any doubt about the patient's responses to any of these questions, advice should be sought from the patient's GMP or a psychiatrist/psychologist before proceeding.

The importance of facial attractiveness in modern society cannot be overlooked. It may be that patients who request treatment are not merely seeking aesthetic improvements but are, subconsciously, reacting to society's view that facial attractiveness is important. Dental practitioners obviously have a vital role to play in the management of patients who have concerns about their dental or facial

appearance. However, it is also important not to unnecessarily reinforce the myth that facial attractiveness is all-important and that, if one's teeth are perfect, life will be better. Patients should be encouraged to realize that other features of their personality are also important in social encounters, establishing relationships and securing employment.

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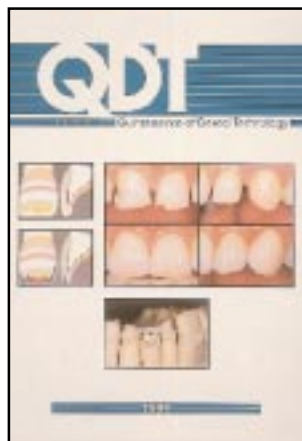
BOOK REVIEW

Quintessence of Dental Technology (QDT). Editor, John Sorensen. Quintessence Publishing Co., Chicago, 1999. (208pp., \$US60).

The interface between dentist and dental technician has often been considered to be less than ideal, possibly because modern training of dentists contains little which helps the clinician to appreciate the needs of, and pressures on, the technician. Reading a book aimed at both might be a way of improving the situation, and QDT usually contains much information which is relevant to the laboratory and the chairside.

The 1999 issue of this annual publication begins with some excellent illustrations of ceramic work by Naoki Aiba and the clinician Brian Vence, and a chapter by Naoki Aiba which describes a case in which an interproximal space is closed. The build-up of the porcelain restorations is described in detail, but it was good to note that a section of this chapter was entitled 'Discussion with dentist and patient', i.e. treatment planning is just as important for the aesthetic case as it is for the multiple unit bridge.

Chapter 2 discusses the role of the interdental papilla, namely to protect the



subepithelial connective tissue from external irritants, such as infections and food remnants, and describes how this may be maintained by correct laboratory procedures. Following chapters describe theory and practice in relation to the recently introduced Vitapan 3D Master shade determination system (Vita Zahnfabrik, Bad Sackingen, Germany). One chapter is written by a member of the staff at Vita, Dr Markus Vollmann, who presents a review of the theory of colour and its classification, and how this relates to the new system. This clear exposition of the new system is most useful. A chapter by Dr Edward McLaren gives details of the build-up technique associated with the new shade system.

Shade matching is important, so the chapter on the Shade Eye System by Shofu is also of relevance to the clinician and technician. Subsequent chapters deal with newly developed ceramic/composite systems for posterior prostheses and fibre-reinforced prostheses – perhaps one of the most interesting developments in prosthodontics in recent years. Further chapters address the strain-free restoration of implants and the newly introduced Empress 2 system (Ivoclar, Liechtenstein).

The book, as one would expect from Quintessence, is illustrated lavishly in colour, is easy to read and good value at its price. If one were to offer any criticism, it is that several chapters were written by authors with an affiliation to the products which were being described, and one therefore may be led to wonder whether the pitfalls – if there are any – of these systems were being addressed in full. Notwithstanding this, the book contains much material of interest to the clinician who wishes to learn something about the laboratory procedures related to techniques which (s)he uses, and may be of great value to those wishing to introduce the new Vitapan system to their practice.

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