Modern trends in cosmetic dentistry and increasing public awareness of dental aesthetics have made patients expect high-quality results. The smile, as a facial expression, plays a key role in their sense of well-being, social acceptance, success at work and in relationships, and self-confidence. The aesthetic expectations and demands of dental patients have increased substantially. Now, a glowing, healthy and vibrant smile is no longer available only to millionaires and movie stars. Therefore, many dentists are incorporating various smile design protocols in their daily work in order to meet the increasing aesthetic demands of their patients.

Smile aesthetics

A smile is a facial expression that is closely related to the emotions and psychological state of a person. A smile is exhibited voluntarily or involuntarily by various expressions and is essential in expressing friendliness, agree-

ments and psychological state of a person. A smile can be established with the application of various principles of smile design, and the creation of subjective beauty may enhance cosmetic value.2


Smile design

Smile design has been defined in various ways in the literature; I would like to summarise it as follows: “Smile design is a systematic process governed by the psychology, health, function and rules of natural aesthetics to bring about some changes in soft- and hard oral tissue within anatomical, physiological and psychological limitations, thereby creating a positive influence on the aesthetics of a person's face and personality as a whole.”3

We all appreciate a beautiful smile when we see it, but it is dif-

ficult to explain exactly what makes a smile beautiful. It is evi-
dent that a pleasing smile depends on the following features: the quality of the dental and gingival components, the con-

formity to the rules of structural beauty, the relationship between teeth and lips, and their harmonious integration with the facial components.4 Overall facial beauty and smile aesthetics are normally judged by psychological aspects—perception, personal- ity, desire—the state of health, the mathematical ratio of the fa-
cial, dento-facial and dento-gingival components. The psycho-

logical aspects are highly subjective and fluctuate constantly be-
cause of identity, peer and media pressure. Hence, the only objec-
tive method of aesthetic analysis is mathematical.

Indeed, mathematics has been considered the only frame of reference for comprehending nature.5 Therefore, the cosmetic dentist needs to be familiar with various mathematical and geo-

metric concepts for achieving smile aesthetics and their clini-

cal protocols.

The Smile Design Wheel

For any smile design proce-
dure, the clinician needs to con-
sider the elements of the smile design pyramids—psychology, health, function and aesthetics (PHFA), listed here according to order of importance.6 It is neces-
sary to determine the patient's psychological status, establish a healthy oral environment, re-

store function and then give at-
tention to enhancing the ase-

thetic aspect. All four pyramids should be accorded equal impor-
tance to achieve a desirable clini-

cal result.

By integrating these PHFA pyramids, I developed the Smile Design Wheel (Fig. 1), in which each pyramid is subordinated into three related zones. The Smile Design Wheel was devised as a simple guide to the most impor-
tant components of smile de-
sign, their clinical signifi-
cance and sequence to be

considered. In the next section, I briefly explain the Smile Design Wheel protocols with PHFA pyramids assess-

ment and their basic objec-
tives.

Step 1: Understand—

The pyramid of psychology

According to Prof. Robert A. Baron, psychology is best defined as the science of behaviour and cognitive processes. Behaviour deals with any action or reaction of a living organism that can be observed or measured. Cognitive processes deal with every aspect of our mental life: our thoughts, memories, mental images, rea-

soning, decision-making, and so on, in short, with all aspects of the human mind.

In smile design, we normally try to understand the second part of psychology, i.e. the human mind or rather the minds of our patients. There are three funda-

mental zones we con-

sider in detail for the psychological pyra-

mid assessment: perception, per-

sonality and desire.

Perception

Perception is the process through which a person can se-

lect, organise and interpret input from their sensory receptors. A person cannot imagine beauty and aesthetics without some in-

put in advance. The media is the most common source of informa-

tion at present regarding beauty and aesthetics. A patient usually conveys his or her own perception of smile aesthetics based on his or her own personal beliefs, cultural influences, aesthetic trends within society and infor-

mation from the media.

Dentists need to commu-

nicate with their patients to determine such informa-

tion during the initial consultation, which helps in under-

standing the pa-

tient's perception of the treatment result. The
use of questionnaires, visual aids, such as previous clinical cases or smiles of various celebrities, can aid immensely in this process.

**Personality**

According to the human psychology, personality is an individual’s unique and relatively stable pattern of behaviour, thought and emotion. It is to be noted that each patient's problem or concern should be comprehensively evaluated with respect to his or her personality type. According to Roger F. Levin, there are four personality types:

- Driven: This type of person focuses on results, makes decisions quickly, dislikes details or paperwork, and likes to have a good time.

- Amiable: People with this personality type are attracted by people with similar interests, fear consequences, are slow in decision-making, react poorly to pressure, are emotional and slow to change.

- Analytical: This type of person requires endless details and information, has an inquiring mind, is highly exacting and emotional. This type is the most difficult to convince and takes the longest to reach a decision.

**Desire**

Desire is a subjective component. Increased public awareness of smile aesthetics through the media has led to a rapid increase in patients’ desires and levels of expectation. Patients are now willing to pay for the enhancement of their smile aesthetics. Therefore, the ethical responsibilities of cosmetic dentists in identifying the need or want-based desires of patients have also increased. The desires and levels of expectation in every patient are very subjective, but higher than what is clinically achievable, and it is the clinician's duty to explain and guide patients towards a realistic aesthetic goal.

The psychological assessment of a person is very subjective; however, aspects like perception, personality, expectation or desire are important for the smile design procedure. Patient satisfaction is closely related to these aspects. Hence, understanding the pyramid of psychology is an integral aspect in smile design. **

**Objective; however, aspects like perception, personality, expectation or desire are important for the smile design procedure.**

**Step II: Establish**

**The pyramid of health**

The pyramid of health is divided into three zones: general health, specific health and treatment.

The health pyramid assessment is a measure of the patient’s health that is vitally important in the treatment of any aesthetic component.

**Step IV: Enhance**

**The pyramid of aesthetics**

The pyramid of aesthetics is the last but most sensitive pyramid of the Smile Design Wheel, as aesthetics has both subjective and objective aspects. The assessment of the subjective aspects—perception, personality, desire—is carried out during the pyramid of psychology. The assessment of the aesthetic components can be done using either of the two methods described above.

**Conclusion**

Today, various protocols of smile design are available in cosmetic dentistry. However, most clinicians wish to use the simplest protocol with the most predictable results. It is to be noted that smile design should always be a multifactorial decision-making process that allows the clinician to treat patients with an individualised and interdisciplinary approach.

The Smile Design Wheel presented in this article clearly indicates the most important components (PHFA pyramids) of smile design, their clinical significance and sequence to be maintained during the smile design procedure. I believe that the Smile Design Wheel is a simple and practical protocol in smile design that can help the clinician to easily comprehend the multiple factors of aesthetic components.