



# Preoperative Psychological Preparation of Children

## Çocuklarda Preoperatif Psikolojik Hazırlık

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Surgery and anaesthesia are significant sources of anxiety for children. In the preoperative period, reducing anxiety helps in preventing the negative consequences that may occur after surgery. The predetermined high-risk children in terms of the development of anxiety play an important role in reducing the negative consequences. Recently featured approaches are modelling and coping techniques, although many techniques are used in the preoperative psychological preparation. The use of computer programs in this area may facilitate important achievements, and it needs to support new studies to be performed.

**Keywords:** Anaesthesia, anxiety, child, coping, preoperative

Cerrahi ve anestezi çocuklar için önemli derecede anksiyete kaynağıdır. Preoperatif dönemde anksiyetenin azaltılması ameliyat sonrasında oluşabilecek olumsuz sonuçları engellemektedir. Anksiyete gelişimi açısından yüksek riskli çocukların önceden belirlenmesi bu olumsuz sonuçların azaltılmasında önemli rol oynamaktadır. Preoperatif psikolojik hazırlıkta birçok teknik kullanılmakla birlikte son zamanlarda öne çıkan girişimler modelleme ve başa çıkma teknikleridir. Bilgisayar programlarının bu alanda kullanılması önemli kazanımlar ortaya koyabilir ve yapılacak olan yeni çalışmalarla desteklenme ihtiyacı göstermektedir.

**Anahtar kelimeler:** Anestezi, anksiyete, başa çıkma, çocuk, preoperatif

Surgery and anaesthesia are responsible for the significant emotional stress in children and their parents. On the basis of behavioural and physiological investigations for anxiety, anaesthesia induction has been noted as the period when children experience the highest stress level in preoperative conditions (1). The consequences of stress are generally expected in the early postoperative period; therefore, one of the responsibilities of the anaesthesiologist is to provide stability to patients in physiological and psychological aspects because adverse outcomes can be experienced for a long time (1-9). An anaesthesiologist should understand the basic principles of the psychological development of a child and should be prepared for threatening conditions in terms of the psychological status to reduce emotional stress caused by anaesthesia and surgery. The first step in the psychological preparation of children undergoing surgery is to identify children who are at a high risk for the development of preoperative anxiety. This step is particularly important at clinical centres in order to be sensitive to operating costs because routine pharmacological or behavioural interventions include significant disadvantages, such as increased drug use, nursing services, delayed discharge and equipment costs for patients undergoing ambulatory surgery. Expectations of parental separation, pain or uncomfortable feeling, lack of control, lack of uncertainty regarding sleep, the presence of technical staff with masks, non-child-focused environment are threatening for children. Factors related to children are age, developmental maturity, previous experience with medical procedures and diseases and personal coping with anxiety and parental anxiety (10-13). Environmental conditions related with the operating room are medical staff communication, light intensity, noise level generated by the staff and device and the number of medical personnel who interact with the child. Young children are at higher risk for preoperative anxiety than those who are older. In particular, children aged between 1 and 5 years are at high risk for the development of anxiety before surgery (10, 12, 14-16). In particular, children of this age are more influenced because they are dependent on their parents and can recognize the absence of their parents. It is difficult to explain the procedures and their requirements, and these children may present quite a serious behavioural regression following hospitalization (17). An older child (>6 years) can predict a situation that may induce pain or sleep. School-aged children experience stress related to surgical procedures and potential injuries rather than parental separation. High-level basal anxious or shy children exhibit high levels of anxiety on the day of surgery (10, 18, 19). Some children want to be informed and demonstrate enthusiasm in actively participating in the preparation program; they probably benefit

from the psychological preparation. However, other children are reluctant to cope, and they are considered as “quiet child”. In fact, this second group of children can be more sensitive to the psychological preparation efforts; however, they generally refuse to participate in such programs.

Preoperative anxiety of a child is strongly associated with the anxiety of the parents. Parents who are divorced and have lower education levels have significantly more anxiety preoperatively (10, 16). The risk of development of preoperative anxiety is higher in children who experience exciting or stormy events with medical staff previously than those who are unexperienced.

A child who has undergone numerous surgeries can have higher or lower anxiety levels than expected, and the quality of previous interventions is more important rather than the number of them (20).

The changes obtained by the preoperative preparation programs over the past two decade remain limited. To date, many limitations, including unsuitable healthcare conditions, high costs and variability for individuals, workforce and time loss, can lead to decreased research interest in this area. To minimize these limitations, preoperative preparation programs should be more accessible, specific to individuals, inexpensive and evidence based. Information leaflets, videotapes, role-play techniques, child life specialists, clown doctors, music, playing game, acupuncture and hypnosis have been studied (21-23). In fact, the most effective strategies are improvement of coping skills and modelling (24). Novel trends for preoperative preparation in the future would be likely related to these two strategies. With advancing technology, it is possible for individuals undergoing surgery to obtain information via the internet (25). In particular, modelling and coping skill techniques can be applicable by well-designed internet service. The integration of developing computer programs to preoperative preparation modalities will encourage us to conduct new researches.

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