

A qualitative analysis of pre-operative anxiety in patients undergoing orthognathic treatment for severe dentofacial discrepancies

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Background

- Orthognathic treatment involves the use of fixed appliances and maxillofacial surgery to correct severe dentofacial discrepancies
- There are 3 main phases involved in orthognathic treatment: *pre-surgical orthodontics*, *orthognathic surgery*, and *post-surgical orthodontics*
- Patients awaiting the surgery component often experience increased anxiety¹, which may result in slower recovery and more post-operative symptoms²⁻⁴
- It is important to identify factors the clinical team could influence to minimise patient anxiety and improve the treatment experience

Study Aim

- To explore factors affecting anxiety in patients prior to orthognathic surgery

Methodology

Study design

- Qualitative study
- One-to-one semi-structured in-depth interviews with orthognathic patients
- Training in conducting qualitative research and interviewing was undertaken prior to commencement of the study



Selection criteria

Inclusion	Exclusion
<ul style="list-style-type: none">• Adult patients• Ready for surgery• Understands English	<ul style="list-style-type: none">• Craniofacial syndromes• Previous orthognathic treatment• "Surgery First"• Lacking capacity

Recruitment

- Recruited from 2 orthognathic centres in the UK (*Eastman Dental Hospital/UCLH Foundation Trust and St George's Hospital Tooting*)

Interviews

- A topic guide developed specifically for the study was used to guide interviews, but participants were free to deviate and discuss any other relevant aspects
- Interviews were conducted a maximum of 8 weeks before surgery, in a non-clinical area, when patients attended for a routine pre-operative appointment
- All interviews were conducted by one interviewer (FK), recorded and transcribed verbatim

Data analysis

- Each researcher independently reviewed the interview transcripts prior to joint discussions
- Use of thematic framework approach⁵, with main themes and subthemes identified in a structured and transparent manner using Microsoft Excel©
- Separate worksheets were used for each theme; participants were each assigned a row and quotes from transcripts inserted into relevant cells

Results

- 7 orthognathic patients interviewed
- Average duration of interviews: 40 minutes

ANXIETY-INDUCING ASPECTS



- **5 main themes** (Figure 1)
- Concerns were present across the pre-hospitalization, hospitalization and post-discharge phases of orthognathic treatment
- **Aspects that appeared to induce anxiety the most:**
 - ❖ Perceived lack of information
 - ❖ Concerns related to general anaesthesia
 - ❖ Anticipated post-operative discomfort

Figure 1. Themes (Inducing Anxiety)

ANXIETY-ALLEVIATING ASPECTS



- **8 main themes** (Figure 2)
- Anxiety-alleviating factors were present across the pre-hospitalization, hospitalization and post-discharge phases of orthognathic treatment
- **Aspects that appeared to alleviate anxiety the most:**
 - ❖ Confidence in the clinical team
 - ❖ Good social support
 - ❖ Adequate amounts of high-quality information

Figure 2. Themes (Alleviating Anxiety)

Conclusion

- A wide range of factors were found to impact on pre-operative anxiety, beyond the surgical procedure itself
- It is important to tailor information to suit an individual patient's needs, by first establishing their information requirements and ensuring their concerns are addressed in order to prevent a mismatch that can lead to increased anxiety
- Results suggest that there are benefits to having strong social support as that may alleviate anxiety
- A cohesive clinical team and good clinician-patient relationships also have considerable impact in making patients feel less anxious

Clinical implications: The study has identified focused aspects for clinicians to consider, and the results will contribute towards developing a support package for orthognathic patients

References

1. BERTOLINI, F., RUSSO, V., SANSEBASTIANO, G. 2000. Pre- and postsurgical psycho-emotional aspects of the orthognathic surgery patient. *Int J Adult Orthodon Orthognath Surg*, 15, 16-23.
2. BEDASO, A., AYALEW, M. 2019. Preoperative anxiety among adult patients undergoing elective surgery: a prospective survey at a general hospital in Ethiopia. *Patient Saf Surg*, 13, 18.
3. KIL, H. K., KIM, W. O., CHUNG, W. Y., KIM, G. H., SEO, H., HONG, J. Y. 2012. Preoperative anxiety and pain sensitivity are independent predictors of propofol and sevoflurane requirements in general anaesthesia. *Br J Anaesth*, 108, 119-25.
4. WALBURN, J., VEDHARA, K., HANKINS, M., RIXON, L., WEINMAN, J. 2009. Psychological stress and wound healing in humans: a systematic review and meta-analysis. *J Psychosom Res*, 67, 253-71.
5. RITCHIE, J. & SPENCER, L. 1994. Qualitative data analysis for applied policy research. In: BRYMAN, A. & BURGESS, R. G. (eds.) *Analysing qualitative data*. London, NY: Routledge.