Behind Words: Interpreting the Unspoken Language

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INTRODUCTION

The orthodontic consultations rely heavily on non-verbal communication such as gestures, facial expressions, tone of voice, and environmental cues, which are essential for building trust, reducing anxiety, and encouraging cooperation. This becomes especially important when engaging with muted Patients - Children and Young person who, due to fear, emotional inhibition, or developmental stage, struggle to articulate themselves verbally. In such situations, the Dentist must act as a perceptive interpreter, attuned to the subtle, unspoken signals conveyed by these Patients (Adams, 2012; Avramova, 2021; Dias et al., 2018). The quality of the Therapeutic Relationship and the overall satisfaction of Child/Young Patients are closely tied to the effectiveness of communication within the Dentist–Patient dyad. Gaining a deeper understanding of Non-Verbal expression enables clinicians to better access the emotional and psychological experience of their Patients, particularly those who remain muted during clinical encounters (Dias, 2013; Dias & Neves, 2024). As noted by Dias et al. (2018), the ability to decode paralanguage and non-verbal behaviour plays a vital role in promoting treatment adherence among Young Patients. Strengthening Relational Communication Skills is therefore fundamental to delivering effective, individualized care in orthodontic consultation (Dias et al., 2024; Dias & Neves, 2024).

AIMS

This study applies a new measurement tool to examine how Dentists and their Young Patients subjectively perceive each other's Non-Verbal cues during orthodontic consultations, with a view to improve this relational dyad.

MATERIALS AND METHODS

A cross-sectional study design was employed, involving a convenience sample of 180 dental practitioners and 180 Child and Young Patients (aged 6–24 years), all engaged in orthodontic appointments (Table 1). Participants completed one of two purpose-developed, 34-item Non-Verbal Language Scales (NVLS): the NVLS-DP for Dental Practitioners and the NVLS-PP for Child/Young Patients. These Likert-type instruments assess five domains: *FACIAL EXPRESSION*, *BODY GESTURES*, *PARALINGUISTICS*, *CONSULTATION ENVIRONMENT*, and *PSYCHOSOMATIC MANIFESTATIONS*. The scale's psychometric reliability was assessed using Cronbach's alpha (α) and McDonald's omega (ω). A comparative analysis of responses from patients and dentists was conducted using Kendall's tau correlations, with significance levels adjusted to the false discovery rate (FDR).

Profile	Dentists (n=180)	Young Patients (n=180)
Sex		
Female	125 (69.4%)	109 (60.6%)
Male	55 (30.6%)	71 (39.4%)
Academic qualification		
Doctorate	5 (2.8%)	
Master	130 (72.2%)	
Master internship	38 (21.1%)	
Bachelor	7 (3.9%)	
Educational level		
Higer education		27 (15.0%)
Secondary education		69 (38.3%)
3rd cycle		51 (28.3%)
2nd cycle		20 (11.1%)
1st cycle		13 (7.2%)
Professional experience	4 + 5	
Age (years ± SD)		15.4 ± 4.1

Table 1 - Sociodemographic and educational characteristics of the study participants (Dentists and Young patients)

RESULTS

The Non-Verbal Language Scales (NVLS) showed strong reliability (Fig. 1)

🦷 Dentists: $\alpha = 0.810$, $\omega = 0.812$

🦷 Patients: $\alpha = 0.851$, $\omega = 0.846$

Figure 1 - Item-level comparison of responses (Q1-34) between dentists and patients. Orange dots indicate significant perception differences (Mann–Whitney test, FDR-adjusted p < 0.05)

Dentists' Perception

🦷 Less experienced (≤2 yrs): more critical about hygiene (Q2, p-adjusted = 0.026)

🦷 More experienced (>10 yrs): better at spotting distress (Q15, Q32; p-adjusted ≤ 0.050)

🦷 Gender trends (not significant): males noticed fear (Q25), females noticed non-pain anxiety (Q17)

Patients' Perception

🦷 Older adolescents: more aware of soft tones (Q1), gloved-touch discomfort (Q4), less overt pain (Q12)

🦷 Females: stronger response to criticism (Q2, p-adjusted = 0.058)

🦷 Higher education: better at noticing subtle cues, less pain expression (Q1, Q12)

Dentist vs Patient Comparison

🦷 Perception mismatch in 30/34 items

🦷 Patients report more distress than dentists perceive

🦷 Key gaps: instrument fear (Q7), turbine noise (Q8), pain (Q29) – all significant after FDR correction

CONCLUSIONS

The NVLS has proven to be a reliable tool for evaluating Non-Verbal Communication with Child and Young Patients in Dentistry consultation. The results suggest that clinical experience enhances Dentists' sensitivity to silent cues; however, significant perceptual gaps persist between practitioners and patients, particularly muted patients - those who struggle to verbalize their concerns or emotions during consultation. These findings underscore the need to incorporate structured Non-Verbal Communication Training into Dental Education for both early-career and experienced professionals, with the aim of bridging interpretive divides, better understanding Patients, and strengthening therapeutic alliances with Child and Young Patients in orthodontic care.

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