Comparison of Subjective & Objective Positive Affect Display: Associations with Social Well-Being in Facial Paralysis

Angela Renne BS[1]; Jason Nellis MD[1], Kofi DO Boahene MD[1]

Department of Otolaryngology – Head and Neck Surgery, Division of Facial Plastics and Reconstructive Surgery, Johns Hopkins School of Medicine

BACKGROUND

Facial paralysis disrupts the primary channel for positive expression and social communication, leading to:

- Elevated social anxiety, depression, and withdrawal
- Avoidance of public settings and social activities
- Difficulty forming and maintaining relationships

OBJECTIVE

Determine whether patients' **self-perceived confidence** in expressing happiness or **objectively measured ability to display happiness** (via *FaceReader* platform) is better associated with social anxiety and participation in adults with facial paralysis.

METHODS

Participants: 115 adults with facial paralysis (mean age 49 years; 62.6% female), single institution

Subjective Measures (self-reported, 0–10 scale):

- *Self-rated happiness display*
- *Self-rated smile capability*

Objective Measures (FaceReader platform during elicited smile):

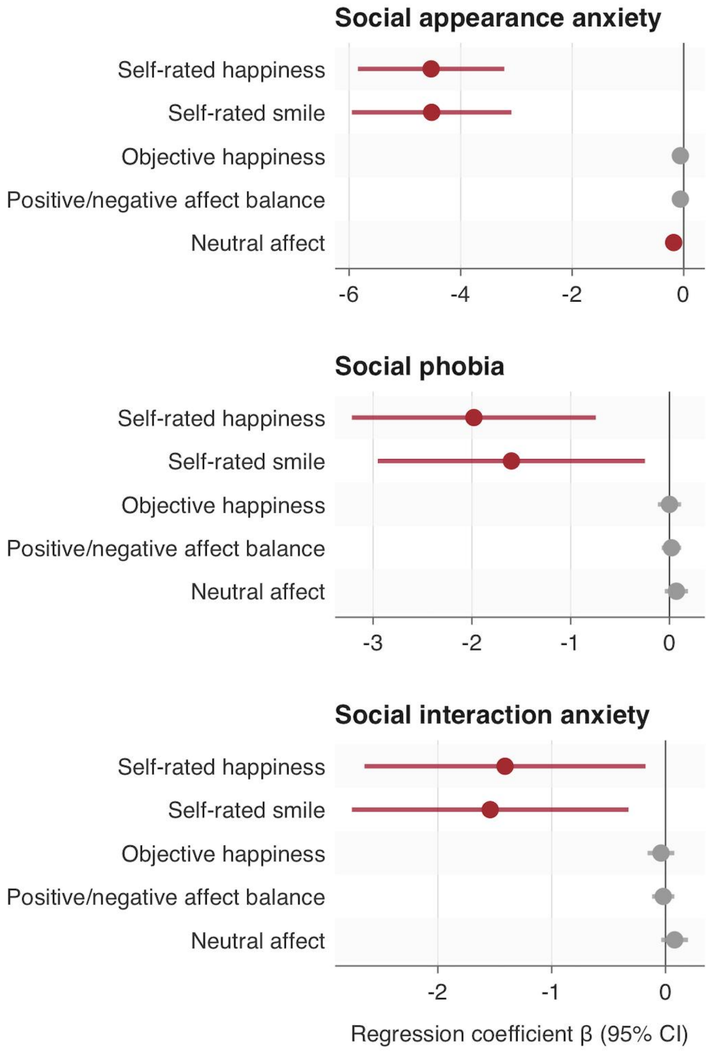
- *Happiness expressivity* (positive affect)
- *Valence balance*: positive to negative affect
- *Neutral affect*

Outcomes (validated scales):

- *Social Appearance Anxiety Scale* (SAAS)
- *Social Phobia Scale* (SPS)
- *Social Interaction Anxiety Scale* (SIAS)

Statistical Analysis: Multivariable linear regression.

RESULTS



Self-rated happiness display retained significant independent associations:

- Social appearance anxiety: β=−4.61 to −4.74 (p<0.001)
- Social phobia: β=−1.82 to −2.09 (p=0.001–0.011)
- Social interaction anxiety: β=−1.44 to −1.65 (p=0.017–0.025)

Objectively graded happiness and balance: not independently associated with any outcome (p≥0.39)

Neutral affect: retained association with appearance anxiety only (β=0.15, p=0.035)

DISCUSSION/CONCLUSION

Patients' confidence in expressing happiness is more strongly associated with social well-being than objectively assessed facial expressivity.

- **Self-efficacy theory**: belief in capability is as consequential as the capability itself
- Patients who doubt their expressivity may feel anxious and preemptively withdraw from social situations regardless of objective capability

CONCLUSION

Social well-being is governed more by **subjective expressivity confidence than objective facial expressivity** → motor restoration alone is insufficient.

Integration of **psychosocial assessment** is a part of facial paralysis care

- Cognitive behavioral therapy for appearance anxiety
- Acceptance-based approaches
- Social skills training
- Peer support communities

Measure subjective expressivity outcomes alongside motor assessment.