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Factors Associated With Health-Related Quality of Life in Patients With Facial Palsy Reply

Bruins, Tessa E; van Veen, Martinus M; Dijkstra, Pieter U

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Letters

COMMENT & RESPONSE

In Reply Lin and Sol refer to some limitations in our study. First we fully agree that the study, as every study, has its limitations.¹ They assume that facial palsy may influence socioeconomic status and therefore health-related quality of life (HRQoL). We performed additional univariate analyses to explore this assumption. We found no significant associations between facial palsy severity (Sunnybrook score) and socioeconomic status operationalized as income, occupational status, and education. In addition, no association was found between the Sunnybrook score and age (≤ 65 and > 65 years). A higher facial clinimetric evaluation scale (FaCE) total score was found for people aged 65 years or younger, people who worked, and those with a higher Sunnybrook score. In multivariable analysis the Sunnybrook score remained the only statistical predictor (results available on request to the corresponding author). Based on our additional analyses we cannot confirm the assumption of Lin and Sol, but future longitudinal research should be performed. Regarding generalizability of our results to the working population, they refer to a study by Nellis et al² that included patients with a mean (SD) age of 52.0 (14.9) years. Based on a normal distribution it can be calculated (mean; SD, 2) that 95% of participants in that study had an age between 23 and 81 years, not the age range of the working population Lin and Sol refer to (15-64 years). Furthermore, not only ours, but also other studies with a lower age range found a weak but significant association between age and HRQoL: mean (SD) age of 47.0 (16.0) years ($\beta = -0.2$)³ and 48.6 (16.7) years ($r = -0.1$), respectively.⁴ Taking the above into account, the association between age and HRQoL needs further research in different age groups of persons with facial palsy.

Second, Lin and Sol argue that some confounding factors are not taken into account in our analysis. We agree that in observational research confounders should always be taken into account. However, our sample size limited the number of potential confounders that can be included in the regression analysis. Lin and Sol state that surgical interventions should be taken into account because they may affect long-term outcomes. Including the effect of interventions on HRQoL in the study would be interesting, but needs to be studied longitudinally. They argue that neuromuscular training should be taken into account because HRQoL might be lower for people

with less access to training. We agree that there is some evidence for a positive effect of neuromuscular training on HRQoL,⁵ but it could also be argued that including neuromuscular training in our study would show a poorer HRQoL for people who had received training because of confounding by indication. People with a poorer facial function are more likely to be referred for or seek neuromuscular training. In addition, lack of including acute patients is commented on because people with a longer duration have learned to adapt to the impairment. But the effect of duration of facial palsy is very small, on average 0.12 per year duration of facial palsy on the FaCE scale score (scoring range 0 to 100).⁴

Tessa E. Bruins, MD
Martinus M. van Veen, MD
Pieter U. Dijkstra, PT, PhD

Author Affiliations: University of Groningen, University Medical Center Groningen, Department of Plastic Surgery, Groningen, the Netherlands (Bruins, van Veen); University of Groningen, University Medical Center Groningen, Center for Rehabilitation, Groningen, the Netherlands (Dijkstra); University of Groningen, University Medical Center Groningen, Department of Oral and Maxillofacial Surgery, Groningen, the Netherlands (Dijkstra).

Corresponding Author: Tessa E Bruins, MD, University Medical Center Groningen, Department of Plastic Surgery, PO Box 30.001, NL-9700 RB Groningen, the Netherlands (t.e.bruins@umcg.nl).

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1. Bruins TE, van Veen MM, Mooibroek-Leeuwerke T, Werker PMN, Broekstra DC, Dijkstra PU. Association of socioeconomic, personality, and mental health factors with health-related quality of life in patients with facial palsy. *JAMA Otolaryngol Head Neck Surg*. 2020;146(4):331-337. doi:10.1001/jamaoto.2019.4559
2. Nellis JC, Ishii M, Byrne PJ, Boahene KDO, Dey JK, Ishii LE. Association among facial paralysis, depression, and quality of life in facial plastic surgery patients. *JAMA Facial Plast Surg*. 2017;19(3):190-196. doi:10.1001/jamafacial.2016.1462
3. Kleiss IJ, Hohman MH, Susarla SM, Marres HA, Hadlock TA. Health-related quality of life in 794 patients with a peripheral facial palsy using the FaCE Scale: a retrospective cohort study. *Clin Otolaryngol*. 2015;40(6):651-656. doi:10.1111/coa.12434
4. Tavares-Brito J, van Veen MM, Dusseldorp JR, Bahmad F Jr, Hadlock TA. Facial palsy-specific quality of life in 920 patients: correlation with clinician-graded severity and predicting factors. *Laryngoscope*. 2019;129(1):100-104. doi:10.1002/lary.27481
5. Beurskens CH, Heymans PG. Mime therapy improves facial symmetry in people with long-term facial nerve paresis: a randomised controlled trial. *Aust J Physiother*. 2006;52(3):177-183. doi:10.1016/S0004-9514(06)70026-5