Patient and Parent Characteristics Related to Quality of Life and Self-esteem in Healthy Youth Undergoing Provocative GH Testing

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Background: Families often seek medical care for a child’s short stature due to concerns about how short stature affects psychosocial function in childhood and projected into adulthood. However, height is a poor predictor of psychosocial adjustment, and there is a critical gap in our understanding of how patient and parent characteristics alter the potential impact of being short.

Hypothesis: We hypothesized that among healthy youth undergoing medical evaluation for short stature, youth quality of life (QoL) and self-esteem would be associated with youth and parental characteristics rather than height.

Methods: Healthy youth aged 8-14 years who underwent provocative GH testing in our Growth Center and a parent participant each completed surveys at or around the time of testing. Surveys collected demographic data; youth and parent report of youth health-related QoL (PedsQL and Quality of Life in Short Stature Youth [QoLISSY]); youth reports of self-esteem (Self-Perception Profile for Children [SPP]), coping skills (Coping Strategies Inventory), and social support (Social Support Scale for Children); and parent reports of perceived environmental threats (World Out There), goals for their child (Achievement Goals), and autonomy support (Parents As Social Context Questionnaire). Clinical data were extracted from the patients’ electronic health records. Continuous variables were summarized as mean ± SD. Univariate models with Holm-Bonferroni correction of significance level 0.05 assessed the marginal effect of each factor on QoL and self-esteem outcomes. Multivariable linear regression models with stepwise selection approaches were used to identify significant predictors of QoL and self-esteem.
Results: Participants included 60 youth (15 female/45 male; age 11.77 ± 1.93 years; 50% prepubertal, 37% Tanner 2, 13% Tanner 3; height Z-score -2.18 ± 0.61) and their parents (55 female/5 male; age 45.65 ± 7.25 years). In multivariable regression, the youth PedsQL physical domain was associated positively with grade in school and perceived friend support. The youth PedsQL psychosocial domain was associated positively with perceived support from classmates and friends, but negatively with disengaged coping. The youth QoLISSEY total score was associated positively with perceived support from classmates. Youth’s global self-esteem (SPP) was associated positively with perceived classmate support and mid-parental height Z-score. Parent report of youth psychosocial QoL (PedsQL) was associated positively with perceived classmate support. None of the other analogous parent assessment outcomes were associated with the QoL or self-esteem outcomes. Neither youth height nor height Z-score was associated with any of the QoL or self-esteem outcomes.

Conclusions: Perceived social support and coping skills were associated with QoL and self-esteem in healthy short youth, whereas youth height was not, and constitute an important potential area of clinical intervention.

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