Malocclusion is a common oral disorder and the demand for orthodontic care is increasing among children. There is a dearth of information as to how malocclusion and its treatment impacts on the life quality of children, which has obvious implications in assessing orthodontic treatment need and evaluating outcomes from orthodontic care. This prospective longitudinal study was conducted to identify associations between orthodontic treatment need and child oral health-related quality of life (COHQuoL); to determine the level of agreement between parents’ and children’s perceptions of COHQuoL; to determine changes in COHQuoL as a result of undergoing fixed orthodontic appliance therapy and to determine changes in COHQuoL following orthodontic treatment.

Children (aged 11-14) seeking orthodontic treatment were recruited in this study and followed-up over a three year period. Children’s parents were also recruited at baseline. Children self-completed the Child Perceptions Questionnaire (CPQ) at baseline (pre-treatment status and expectations of treatment), during orthodontic treatment (at one week, one month, three months, six months, twelve months, and eighteen months after insertion of fixed appliance), and 6-months post-treatment. Their parents completed the Parental Perception Questionnaire (PPQ) and Family Impact scale (FIS) prior to treatment. Children’s pretreatment occlusal models were assessed by three commonly used occlusal indices: Index of Orthodontic Treatment Need (IOTN) including Aesthetic Components (AC)
and Dental Health Components (DHC), *Index of Complexity, Outcome and Need* (ICON) and the *Dental Aesthetic Index* (DAI). Improvements in occlusion following orthodontic treatment was determined by assessing differences in ICON scores obtained from pre- and post–treatment orthodontic casts.

CPQ scores and AC scores were significant correlated (*r*=0.27, *p*<0.01). Children categorized as having an orthodontic treatment need by AC, ICON and DAI has significantly higher CPQ scores than those categorized as having no orthodontic treatment need (*p*<0.05). PPQ scores were not significantly correlated with scores of all occlusal indices (*p*>0.05). FIS scores were significantly correlated with scores of ICON (*r* = 0.26, *p*<0.01). Scores of FIS were significantly higher for children categorized as having orthodontic treatment need as assessed by AC and ICON than those categorized as having no orthodontic treatment need (*p*<0.05). At the group level, there was disagreement between parents and children with respect to COHQoL (*p*<0.001). Agreement between parent and child pairs was poor.

During orthodontic treatment significant changes in CPQ scores occurred (*p*<0.001). At the initial stages of treatment (first week) the greatest compromised to COHQoL occurred. During treatment COHQoL was less compromised than expected (except for the first week).

There was significant reduction in CPQ scores 6-months following orthodontic treatment compared to pre-treatment (*p*<0.001). Changes in COHQoL (CPQ scores) was as expected (*p*>0.05). Perceived improvement in oral health was associated with improvement in COHQoL (reduction in CPQ scores) and meeting patients’ expectations.

In conclusion, orthodontic treatment need was associated with COHQoL. Disagreement existed between parents and children’s perceptions of the impact of malocclusion on children’s’ life quality. Wearing of fixed appliance compromised COHQoL at first week of treatment but not as much as expected. COHQoL improved following treatment and met patients’ expectations.