

## Editorial



# Assessment of Quality of Life in Food Allergy

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► See the article “Quality of Life in Food Allergy: Validation of the Korean Version of the Food Allergy Quality of Life Questionnaire Parent Form (K-FAQLQ-PF) and Risk Factor Analysis” in volume 15 on page 43.

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Health-related quality of life (HRQoL) is one of the important tools for measuring disease burden and outcome of interventions, especially in chronic diseases such as food allergy (FA), diabetes, and other chronic diseases.<sup>1</sup> Particularly, FA is a steadily rising allergic disease for which there is no satisfying treatment at present and frequently leads to severe reactions such as anaphylaxis in children. Hence, the levels of anxiety and other psychological stress of children and their parents are higher than the general population.<sup>17</sup> A recent meta-analysis investigating the outcome of oral food challenge (OFC) and oral immunotherapy (OIT) showed that both OIT and OFCs are associated with an improvement in HRQoL in FA patients.<sup>8</sup> So, long-term measurement of QoL with well-designed questionnaires is necessary to ascertain disease outcome and sustained benefits of OFCs and OIT in FA.<sup>8</sup>

HRQoL is a multi-dimensional construct, generally containing physical, psychological, and social components.<sup>9,10</sup> However, for evaluating more reliable QoL in FA, a disease-specific and age-considering questionnaire is necessary because general measures lack sufficient sensitivity to detect changes resulting from treatment interventions and lack the detail required to assess how FA impacts different age groups and clinical cases.<sup>10</sup> Since FA and food-induced anaphylaxis is most prevalent in infants, and young children, HRQoL in FA are closely related to the parents, and therefore, the parental form of FA-related QoL questionnaire (FAQLQ) is essential.<sup>2,3,11,12</sup> In a recent decade, various questionnaire forms have been discovered to be valid and reliable in measuring the QoL of children with FA, such as the Pediatric Food Allergy Quality of Life Questionnaire, Food Allergy Independent Measure (FAIM), Food Allergy Quality of Life Questionnaire-Child Form, and the Food Allergy Quality of Life Questionnaire-Parent Form (FAQLQ-PF).<sup>13,15</sup> FAQLQs were initially developed for children, teenagers, and adults, and the specially designed FAQLQ-PF was developed and validated for FA patients aged 0–12 years.<sup>15</sup> Among them, the FAQLQ-PF is the only tool that measures the QoL of children aged less than 4 years old. For the development and validation of FAQLQ-PF, the process consisted of 4 steps; 1) item generation using focus groups; expert opinion, and literature review; 2) item reduction using clinical impact and factor analysis; 3) internal and test-retest reliability and construct validity were evaluated using relevant scales of the Child Health Questionnaire (CHQ)-28<sup>16</sup> and the disease-specific FAIM<sup>14</sup>; and 4) cross-cultural and content validity was examined by administering the questionnaire in a sample from the United States. This FAQLQ-PF has been translated into various languages such as Spanish, Malay, Thai, Japanese, and Turkish, and is validated and used as a reliable tool for evaluating QoL in children with FA.<sup>17,22</sup> Nevertheless, it has yet to be translated into the Korean language so far.

Fortunately, in the current issue of *Allergy, Asthma and Immunology Research*, Kim et al.<sup>23</sup> reported “Quality of Life in Food Allergy: Validation of the Korean Version of the Food Allergy Quality of Life Questionnaire Parent Form (K-FAQLQ-PF) and Risk Factor Analysis,” using FAQLQ-PF.<sup>15</sup> In this study, FAQLQ-PF has been translated into the Korean language and validated in the Korean FA sample and normal children. K-FAQLQ-PF consists of 30 items like the original FAQLQ-PF, that are classified into 3 domains: 1) emotional impact; 2) food anxiety; and 3) social and dietary limitations.<sup>15</sup> The number of questions varies according to the age of patients; total 14 questions (6, 3, and 5 items) for children aged 0–3 years, 26 questions (10, 7, and 9 items) for children aged 4–6 years, and 30 questions (13, 8, and 9 items) for children aged 7–12 years. In this study, the English version of FAQLQ-PF was translated into the Korean language according to the World Health Organization guidelines.<sup>24</sup> The forward translation into Korean was done by 2 independent Koreans who speak English fluently by using easy-to-understand words or sentences with the same contents as in the original questionnaire form. Through the panel discussion with 6 pediatric allergists, the most appropriate expression was selected, and the revised version of FAQLQ-PF was back-translated into English by independent translators. After being revised by 3 parents of children with FA in each age group, the 10 expert committee members, including a pediatrician, a professor of nursing, and an elementary school English teacher, revised and finalized the K-FAQLQ-PF.

In this study,<sup>23</sup> the construct validation was confirmed by the Food Allergy Independent Measure-Parent Form (FAIM-PF) and the Child Health Questionnaire Parent Form 28 (CHQ-PF28).<sup>14,25</sup> As a result, K-FAQLQ-PF showed good reliability, constructive validity, and internal consistency in assessing the psychological burden of patients with FA. The authors found that the K-FAQLQ-PF has no floor or ceiling effects, and the psychological impact of FA can be accurately assessed in children with FA and their families using this questionnaire form. Furthermore, the correlations between the K-FAQLQ-PF, FAIM-PF, and CHQ-PF28 were acceptable and consistent with previous studies in the United States and Turkey.<sup>15,21</sup> Kim et al.<sup>23</sup> also found that patients’ age, sex, area of residence, and comorbid allergic diseases were associated with QoL of Korean children with FA. The authors showed significant correlations between K-FAQLQ-PF and FAIM-PF outcomes in the age group of 4–6 years and 7–12 years. So, the authors suggest that the K-FAQLQ-PF evaluates food anxiety less accurately in young children and is more suitable for assessing QoL in children aged 4 years and older. In addition, among CHQ-PF28 domains, mental health and parental impact-emotional domains showed a relatively high correlation with K-FAQLQ-PF, indicating that K-FAQLQ-PF may help measure QoL related to parental emotions and concerns. Furthermore, using the newly validated K-FAQLQ-PF, Kim et al.<sup>23</sup> identify clinical characteristic related to low QoL in Korean children with FA. The authors found that low QoL was significantly associated with female sex, age of 5 years or more, FA diagnosis before the age of 3 years, FA with multiple food restrictions, the presence of atopic dermatitis, and residence in non-metropolitan areas.

In conclusion, K-FAQLQ-PF has been translated, validated, and verified as a reliable tool for measuring parental QoL in Korean children with FA. With this success, K-FAQLQ-PF could be used to assess the disease-specific parental burden and practical outcomes of various interventions including OFCs, dietary restrictions, consultation for lifestyle modification, and OIT in Korean children with FA including food-induced anaphylaxis. Long-term and repeated tests with K-FAQLQ-PF could provide the directions to promote ultimate well-being in children and parents with FA. Hopefully, more clinicians and researchers can use this valuable tool with easy accessibility.

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