



The Impact of Food Allergy on the Quality of Life in Adolescents

Mohamed Youssef Abdel Hamid Mahmoud' and Soha Mohamed Sameh El Safty' .

Assistant Professor of Nutrition and Food Science, Faculty of
Education, Suez Canal University, Ismailia.

Prof Nutrition Sience, Faculty of Education, Suez Canal
University, Ismailia.



۱ شارع محمد أمين شهيب ـ مصطفى كامل ـ الاسكندريه ـ مصر تليفون : ۲۰۳/٥٤٥٤٣١٣ Alexandria – Egypt, Tel. : ۲۰۳/٥٤٥٣١٣ ـ ۲۰۳/٥٤٤٢٧٧٦ Fax





Abstract

Background: The impact of food allergy on health-related quality of life (HRQL) amongst adolescents is incompletely understood. The aims of this study were to make use of the specific food allergy quality of life questionnaire-teenager form and to investigate the association between objectively-diagnosed staple food allergy and HRQL amongst adolescents.

Methods: In this cross-sectional study, 155 adolescents aged 17-14 years [n = 99 (19 %) boys] with objectively-diagnosed food allergy living in Ismailia, Egypt were included. Adolescents completed the specific food allergy quality of life questionnaire-teenager form, which has a corresponding scale of 1 = best HRQL, and 2 = worst HRQL. Over- all HRQL and domain-specific HRQL were established. Adolescents also reported symptoms, prescription and presence of other food allergies. Inability to stand/collapse, and/or loss of consciousness. Clinically different HRQL was set at a mean difference of > 1.1.

Conclusions: The study found that food allergies significantly affected the quality of life in adolescents. As well as low-income and educational level of the parents enhanced this effect to occur

Keywords: Adolescents, Food allergy, Quality of life, Health-related quality of life

Introduction

Food is an essential element in our lives; it is essential for staying alive and it is an important part of our cultural identity. For patients with a food allergy some sources of food may be fatal. Consequently, the lives of these patients may be seriously disrupted. Food allergy is an adverse immunological reaction that may be due to IgE- or non-IgE-mediated immune mechanisms. Although any food may provoke a reaction, relatively few foods are responsible for the vast majority of food allergic reactions:



۱۴ شارع محمد أمين شهيب - مصطفى كامل - الاسكندريه - مصر تليفون : ۲۰۳/٥٤٥٤٣١٣ - ۲۰۳/٥٤٤٢٧٧٦ Fax
- ۲۰۳/٥٤٤٢٧٧٦ - ۲۰۳/٥٤٤٢٧٧٦





milk, egg, peanuts, tree nuts, fish, shellfish and some fruits and vegetables [1]. While food allergies and eczema are among the most common chronic non-communicable diseases in children in many countries worldwide, quality data on the burden of these diseases is lacking, particularly in developing [7]. Research in paediatric suggests that food allergy can affect several aspects of health-related quality of life (HRQoL) for children, adolescents, and their families because the risk of allergic reaction limits children in their autonomous social activities [7]. Food-hypersensitive adolescents are absent from school more often and less self-confident [5]. Food allergy (FA) has increased in developed countries and can have a dramatic effect on quality of life, so as to provoke fatal reactions [o-\lambda]. The way such allergy-associated condition is manifested varies extensively depending on the specific foods and the type of reactions and symptoms that the child has. Adverse reactions to food can result in either immediate or delayed problems depending on the mechanism underlying the reaction. Food reactions can range from mild (e.g. mild itching or redness around the mouth), unpleasant and scary (e.g. intense stomach pains or asthma) to systemic reactions severe enough to be fatal (i.e. anaphylaxis) [9]. An increase in the prevalence of asthma and atopic during the last two decades is documented for both children [\(\cdot\)] and adults [\(\cdot\)]. The International Study of Asthma and Allergies in Childhood (ISAAC) has demonstrated a large variation in the prevalence of asthma symptoms in children throughout the world [17]. It is well known that there are more individuals with perceived hypersensitivity than individuals with verified/doctor-diagnosed allergy. [17, 15]. Research has demonstrated that allergic diseases have a negative impact on individuals' health-related quality of life (HRQL) and a number of studies describe HRQL-deteriorations in children and adults with asthma [10,17], eczema [17, 14] and rhinitis [19, 71]. Studies have also shown that allergy-associated physical and organ-related measures and tests do not always correlate with HRQL scores [71, 77]. Adverse reactions to food constitute an important part of allergy-associated problems, especially among children. Still, studies on food allergy and HRQL are scarce. However, parental perception of physical and psychosocial functioning, measured with the Children's Health Questionnaire (CHQ-PF°), has shown that childhood food allergy has a significant emotional impact on the parent



۱ شارع محمد أمين شهيب ـ مصطفى كامل ـ الاسكندريه ـ مصر تليفون : ۲۰۳/٥٤٥٤٣١٣ ـ ۲۰۳/٥٤٤٢٧٧٦ Fax
۱۰۳/٥٤٤٢٧٧٦ - ۲۰۳/٥٤٤٢٧٧٦





symptoms after eating foods that for the vast majority of the population are part of a healthy diet. The only way for the allergic individual to manage food allergy is to avoid eating the food that causes the allergic reaction. The quality of life of the food allergic individual may be seriously impaired. The impact also extend to the family and friends of the allergic individual, as all have to be vigilant to protect the allergic individual from the foods to which he or she is (or believes to be) allergic. Approximately ξ - $\frac{1}{2}$ of children and 1-7% of adults are diagnosed with food allergy. However, up to 77% of the adult populations believe that they are allergic towards one or more foods. Whether they are truly allergic or not they will have dietary restrictions, which may have an impact on their quality of life [⁷⁰]. For that reason, the quality of life of a large part of the population may be affected by food allergy [77]. Quality of life (QOL) is defined by the World Health Organization (WHO) as "an individual's perception of his/her position of life in the context of the culture and value systems in which he/she lives and in relation to his/her goals, expectations, standards, and concerns". HRQL refers to a person's or group's perception of the effect of an illness and its therapy on their QOL and daily functioning. HRQL has three components: social, psychological, and physical [YV].

Methods

The present study aimed to identify

- 1. Determine the types of food that cause food allergies among adolescents.
- Y. Identify the differences in food allergies among adolescents and the quality of life according to the different (housing - parents' education family income)

Setting: primary (six grade), preparatory and secondary schools of El Kassasen city. Faculty of nursing and education (first year) Suez Canal university.



۱۴ شارع محمد أمين شهيب ـ مصطفى كامل ـ الاسكندريه ـ مصر تليفون : ۲۰۳/٥٤٥٤٣١٣ عامرع محمد أمين شهيب ـ مصطفى كامل ـ الاسكندريه ـ مصر تليفون : ۲۰۳/٥٤٥٤٣١٣ - ۲۰۳/٥٤٤٢٧٧٦ Fax





Inclusion criteria: Adolescents who already diagnosed with food allergy to one or more type of food From both gender

Tools of data collection:

Tool (1): Data were gathered through a structured questionnaire sheet, that was designed by the researchers after extensive review of literature and written in Arabic language to suit the understanding level of the participants. It consisted of six parts: the first part including the personal data of adolescents as age, grade of school, income, family numbers, education, consanguinity and jobs of father and mother. The second part including questions about type of food that causes allergy, signs and symptoms, complications and effect of allergy on academic performance and family.

Tool ($^{\gamma}$): Food Allergy Quality of Life Questionnaire for adolescents by FLOKSTRA-DE BLOK ET AL, $^{\gamma} \cdot \cdot \wedge$. It consisted of $^{\gamma q}$ questions about influence of allergy on quality of life.

Tool (*): Questionnaire on health condition. It concerned with the influence of allergy on health condition (as a whole). It was a general questionnaire that covers different aspects of mental and physical health.

Operational Design: The operational design included preparatory phase, pilot study, field work and limitation of the study.

A-Preparatory phase: It includes reviewing of literature, different studies and theoretical knowledge of various aspects of the problems using books, articles, internet, periodicals and magazines.

B- Pilot Study: A pilot study was carried out after the development of the tool and before embarking on the actual study (data collection). It was conducted in order to test applicability & feasibility of the tool of data collection. It was carried out on \.'\'\'\'\'\' of the study subjects, to evaluate the content of tool and to determine whether or not the items were understood by adolescents and they was excluded from the entire sample of research



۱ شارع محمد أمين شهيب ـ مصطفى كامل ـ الاسكندريه ـ مصر تليفون : ۲۰۳/٥٤٥٤٣١٣ ـ ۲۰۳/٥٤٤٢٧٧٦ Fax

- ۲۰۳/٥٤٤٢٧٧٦ Fax





work. Needed modification was done based on pilot results, making an assurance that the tool as a whole achieved the aim of the study.

C- Field work; The data collections were done during second semester of year Y. VA. Data collection was governed by the availability time for both the investigator and the study respondents. After explaining the aim of study and taking approval from adolescents, the researchers complete the questionnaires (three forms).

Ethical consideration

Primary approval was obtained from the research ethical committee in the Faculty of Nursing, University. The researcher explained the aim and nature of the study to adolescents for gaining their cooperation. Oral affirmative consent was obtained from adolescents to participate in the study. The topic of this study doesn't touch religious, ethical, moral and cultural issues among participants, adolescents were assured that all gathered information will be confidential and will be used only for the purpose of the study.

Limitations of the study

Statistical treatments:

Statistical analyzes were performed using the Spss.x program, the SAS program to determine the arithmetic mean, the standard deviation, the frequencies, the percentages, the Pearson correlation coefficient, the differences between the averages using the T.Test test, the one-way analysis using F.Test, and LSD.



۱ شارع محمد أمين شهيب - مصطفى كامل - الاسكندريه - مصر تليفون : ۲۰۳/٥٤٥٤٣١٣ Alexandria – Egypt, Tel. : ۲۰۳/٥٤٥٤٣١٣ - ۲۰۳/٥٤٤٢٧٧٦ Fax





Results:

The results of the current study were presented in the following sequence:

Table ('): Distribution of the studied sample as regards their sociodemographic characteristics (n=1) \in (1)

Socio-demographic characteristics	Number	Percentage %	
Age (in years)			
17_10	1.7	۸۲	
17-17	٤٢	1 A	
Gender			
Boys	£ 0	٣١.٠	
Girls	9 9	٦٩.٠	
Level of education (father)			
Low (primary or lower)	1.1	٧٠.١	
Middle (secondary)	١٨	17.0	
High (university and above)	٥	٣.٤	
Level of education (mother)			
Low (primary or lower)	11.	٧٦.٤	
Middle (secondary)	**	١٨.٨	
High (university and above)	٧	٤٠٨	
Housing condition			
Popular	9.7	٦٣.٩	
Medium	٣٦	40	
Up scale	١٦	11.1	
Family Size			
Small (٣-٤)	٤٢	79.7	
Medium (°-¹)	۸۸	71.1	
Big (V and more)	١٤	۹.٧	
Family income			
Low (less than VV · · EP)	9.7	٦٣.٩	
Medium (۱۲۰۰ to less than ۲٤۰۰ EP)	٣٥	7 £ . ٣	
High (Y : · · and more)	1 V	11.4	

Table (1) illustrates that, ٦٩% of the study sample were girls, and the majority of adolescents their ages ranged between ١٢ and ١٠ years ٨٢%. Most of the sample had low level of father education, mother education, housing condition and family income (٧٠.١%, ٧٦.٤%, ٦٣.٩% and ٦٣.٩% respectively). While less than two thirds of them (٦١.١%) had medium family size.



۱۴ شارع محمد أمين شهيب ـ مصطفى كامل ـ الاسكندريه ـ مصر تليفون : ۲۰۳/٥٤٥٤٣١٣ كارع محمد أمين شهيب ـ مصطفى كامل ـ الاسكندريه ـ مصر تليفون : ۲۰۳/٥٤٥٤٣١٣ - ۲۰۳/٥٤٤٢٧٧٦ Fax





Table (7): Distribution of the studied sample according to number, type

Items	Number	Percentage%
Number of allergic foods		
<u>\</u>	<mark>۸٩</mark>	<mark>٦٢.٠</mark>
<mark>Y</mark>	£0	<mark>۳۱.۰</mark>
<mark>"</mark>	١.	<mark>٧.٠</mark>
Types of allergic foods		
Strawberry	118	٧٩.٣
Milk	٧٢	0 •
Wheat	١٢	۲.۸
Mango	۸٧	٦٠.٣
Fish	77	10.0
Beans	10	۱۰.۳
Complications of food allergy		
Gastrointestinal	٩٨	٦٨.٣
Dermatological	١٣٠	9.,7
Oral cavity	۲٥	٣٩.٠
Respiratory	١٤٤	١
Cardiovascular	٣٩	٨٦٢
Anaphylaxis	Al	٥٦.١

As shown in table () near two thirds of study sample \'\'\' were allergic to only one food. While Y % were allergic to three foods. The majority of the sample (Y 9.7 %) was allergic to strawberry. While the minority of them were allergic to wheat. All adolescents (\'\.\'\') had respiratory complications due to allergy, followed by dermatological, gastrointestinal and anaphylaxis (4.. 7%, ٦٨. 7% and ٥٦. 1%) respectively.



٤ ١ شارع محمد أمين شهيب - مصطفى كامل - الاسكندريه - مصر تليفون: ٣١٥٤٥٤٥٤ ٢٠٣/٥٤ Alexandria - Egypt, Tel.: Y. T/O ! O ! T | T - Y. T/O ! E Y V Y

: 7 . 7/0 : : 7 7 7 7





Table (♥) Descriptive statistics for food allergy in adolescents n=\ \(\xi \xi\$

Aspects of food allergies	Range (Degrees)	Mean ± SD	
The impact of food allergies on the family (Y\) items)	low level (۲۱:۳0 Degree)		
	Middle level (४२:६९ Degree)	٥٣.٤٦ <u>+</u> ٦.٣٤	
	High level (*•: ٦٣ Degree)		
The problems faced by adolescents because of food allergies (Titems)	low level (۲٦: ٤٣ Degree)		
	Middle level (٤٤:٦١ Degree)	70.77 ± 0.07	
	High level (٦٢:٧٨ Degree)		
Adolescent fears of food allergies(\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	low level (۱۷:۲۸ Degree) Middle level (۲۹:۶۰ Degree)	٤٩.١ <u>+</u> ٥.٣٨	
	High level (٤١:٥١ Degree)		
Food allergies in general (75 items)	low level (٦٤:١٠٦ Degree)		
	Middle level (۱۰۷:۱٤۹ Degree)	\\\\.9\\ <u>+\\\\.</u> \\\\\	
	High level (١٥٠:١٩٢Degree)		

Table ($^{\circ}$) shows that, The average score of the food allergies scale are ($^{1}^{\circ}$, $^{1}^{\circ}$), which is in the high range by ($^{1}^{\circ}$, $^{1}^{\circ}$). Adolescent's food allergy affects highly on the family $^{\circ}$, 1 presented by ($^{1}^{\circ}$, $^{\circ}$). Moreover adolescents had high effect level regarding the problems faced by adolescents because of food allergies $^{1}^{\circ}$, $^{\circ}$ represented by $^{1}^{\circ}$, $^{\circ}$. Regarding adolescent's fear of food allergy, they affected highly by mean of $^{1}^{\circ}$, and percentage of 1 , 1 .







Table (4) Descriptive statistics that describe the level of the quality of life for adolescents:

The quality of life for adolescents	Range (Degrees)	Mean ± SD
	low level (***;*** Degree)	Y
physical aspect (^{YY} items)	middle level (*Y:01 Degree) High level (01:11 Degree)	۲۱.٥٩ <u>±</u> ٤.٤١
	low level (۲۳:۳۸ Degree)	
Health aspect ^{YT} items)	middle level (٣٩:05 Degree)	ΥΥ.\٦±٤.ΘΛ
	High level (°°: 79 Degree)	
	low level (۱۹:۳۱ Degree)	
Social relations(19 items)	middle level (٣٢:٤٤ Degree)	71.17±5.47
	High level (٤°:° Degree)	
0 14 616 1 1 77	low level (٦٤:١٠٦ Degree)	
Quality of life as a whole(\(\frac{\xi}{2} \) items)	middle level (١٠٧:١٤٩ Degree)	7£. £Y±1•.•1
	High level) (١٥٠:١٩٢ Degree	

Table ($\frac{1}{2}$) shows that the average quality of life measure for adolescents is $\frac{1.0.17}{100}$ degrees ($\frac{70.120}{100}$), which is considered a low level. The quality aspects of life were as follows: Health, Physical and Social Relations ($\frac{79.19}{100}$, $\frac{71.17}{100}$ and $\frac{70.19}{100}$) respectively. The table also shows the difference in the standard deviation of the sample grades from the scale axes.







Table (°) Correlation between food allergies among adolescents and the quality of life dimensions.

Food allergy Quality of life	Physical aspect	Health	Social	Quality of life
The impact of food allergies on the family	-•.10**	- •.۲7**	- •. ۲ ۷**	- •.۲۸**
The difficulties faced by adolescents because of food allergies	-•.1***	- •.٣٧**	- •.٤١**	- •٣٨**
Adolescent fears of food allergies	-•.1	- •.o٣**	**	- • .
Food allergies in general	-•.19**	07**	- • . έ Λ**	-·. ٤ A*

^{**} Significance at level •.• \

Seen from the table (°) there is a negative correlation between the statistically significant food allergies in adolescents and the quality of life dimensions at the level of significance '.'', which highlights the importance of the current study.

Discussion:

In this cross-sectional study we used a food allergy-specific questionnaire that is robust for adolescents with food allergies that provided insights into associations between food allergy and HRQL that could not have been gleaned via a generic questionnaire [17]. Our study population included 155 adolescents, of whom 99 (79 %) were boys (Table 1). Most (77 %) of participants were allergic to only one food, although 7 % were allergic to all three foods. The most common food allergy was to Strawberries (79 %). Other participant-reported allergies to other foods, particularly to mango (70 %) and milk (20 %), were also common. Allergies to fruits and vegetables



۱ شارع محمد أمين شهيب _ مصطفى كامل _ الاسكندريه _ مصر تليفون : ۲۰۳/٥٤٥٤٣١٣ كا ۲۰۳/٥٤٥٤٣١٣ - Alexandria – Egypt, Tel. : ۲۰۳/٥٤٥٤٣١٣ – ۲۰۳/٥٤٤٢٧٧٦ Fax





are more common in adulthood. On the other hand, nuts and sea foods may cause severe allergic reactions [YA]. Nearly all adolescents reported lower respiratory (9° %) and dermatological (9° %) symptoms. Gastrointestinal symptoms were also common (7A %). Although symptoms involving the cardiovascular/neurological system were the least common, they were nonetheless reported by YV % of adolescents. Adolescents with food allergy describe themselves as being very mature for their age, yet dependent on others in the event of a reaction [\(\frac{9}{3} \)]. One can speculate that these opposing characteristics may result in worse food allergy-specific HRQL.Unlike other chronic conditions which adolescents may neglect or be non-compliant [7.]. food allergy can-not be ignored for longer than an interval between meals or snacks. But given that food is an integral part of social events, feelings of exclusion and 'being different' may ensue [11]. This may begin to explain why food allergy is strongly associated with worse HRQL. This may also explain why neither the number of allergies or symptoms, nor AAI prescription is a predictor of clinically worse HRQL. Further, adolescents often base their food choices primarily on enjoyment and secondarily on content [, thereby engaging in risk taking behaviors [, that may potentially lead to severe reactions. Yet, like others [""], we found no difference in HROL between those with vs. without a history of anaphylaxis. The financial burden of food allergy on healthcare systems [**] and on households [\(\mathbf{r}^\circ\)] is high, and allergy-related hospitalizations are increasing [Worse HRQL also predicts greater healthcare costs [V]. Thus, addressing HRQL amongst adolescents, as well as children [Th] and adults ["] with e food allergy warrants considerable attention. The presence of poor social, mental or somatic health may increase the perception of allergylike conditions. Still, irrespective of what the underlying causes are, it is evident that adolescents who experience allergy-like conditions experience HRQL-deterioration [\(\cdot \)]. A significant number of teens with food allergy admit to risk taking that varies by social circumstances and perceived risks. The results imply that education of teenagers and,

importantly, those around them during social activities might reduce risk taking and its consequences [5]. Food allergy has a significant effect on activities of families of food allergic children. Further study is needed to



۱ شارع محمد أمين شهيب ـ مصطفى كامل ـ الاسكندريه ـ مصر تليفون : ۲۰۳/٥٤٥٤٣١٣ مصطفى كامل ـ الاسكندريه ـ مصر تليفون : ۲۰۳/٥٤٥٤٣١٣ - Alexandria – Egypt, Tel. : ۲۰۳/٥٤٤٢٧٧٦ - ۲۰۳/٥٤٤٢٧٧٦





determine more detailed effects of food allergy on parent-child interactions and development [$\{ \} \}$]. Childhood food allergy has a significant impact on general health perception (GH), emotional impact on the parent (PE), and limitation on family activities (FA).. Factors that influence reductions in these scales include associated atopic disease and the number of foods being avoided [5]. Quality of life studies have highlighted the subjective nature of living with an illness, where emotional, social and cognitive factors, in addition to expectations and coping style, influence personal perception [£ £, £ o]. Health-related OoL considers the effects of an illness and its treatment upon the patient, as perceived by the patient, looking at social, psychological and physical states. In a healthcare system where a patient centered approach is now favored, QoL research in patients with allergy can provide means for improving the management, care and experiences of patients and families. Ostblom et al [57], found that parents of 9-year-old children with food hypersensitivity reported that their child had significantly worse physical functioning, more social limitations and poorer general health than children with nonfood-related allergic diseases and children with no allergic diseases. Those with high levels of food-specific IgE-antibodies also had poorer mental health and general health. It was also noted that the larger the number of previous reactions to foods, the lower the parental reported physical functioning of the child, and the higher the impact upon family social activities [* V]. HRQL in adults is age-dependent and it has been found that HRQL as measured with the scales Physical functioning (PF), Role functioning-physical (RP), Bodily pain (BP) and General Health (GH) decreases with food allergy [\$\lambda\$]. A number of studies have reported that activities undertaken as a family unit are limited by having a food allergic child [4].

Conclusions

The results indicate a need to consider not merely physical consequences but also the psychosocial quality of life impact of allergy-like conditions among



۱۴ شارع محمد أمين شهيب ـ مصطفى كامل ـ الاسكندريه ـ مصر تليفون : ۲۰۳/۵٤٥٤٣١٣ ـ ۲۰۳/۵٤٤٢٧٧٦ Fax
۱۴ شارع محمد أمين شهيب ـ مصطفى كامل ـ الاسكندريه ـ مصر تليفون : ۱۲۰۳/۵٤٤۲۷۷۳ Fax





both females and males. Further research is needed to elucidate the reasons behind the gender differences in this area. It is evident that food allergy has a profound psychosocial impact on children, adolescents and their families. In particular, the constant vigilance needed to avoid allergens and the daily management of food allergy impacts on daily family activities and social events. Food allergy also appears to have a considerable detrimental effect on certain aspects of QoL such as emotional QoL, physical functioning and quality of school life. Certain subgroups of patients and care-givers seem to be most affected. The number of studies looking at the impact of food allergy has increased within the last few years, and this recent development of validated, food allergy-specific tools for studying QoL in children and adolescents should facilitate further research.







References

- 1. Flokstra-de Blok BMJ, DunnGalvin A, Vlieg-Boerstra BJ, Oude Elberink JNG, Duiverman EJ, Hourihane JO, Dubois AEJ. Development and validation of the self-administered Food Allergy Quality of Life Questionnaire for adolescents. J Allergy Clin Immunol Y... Jul; 177(1):179-155.
- T. Covaciu C', Bergström A, Lind T, Svartengren M, Kull I. Childhood allergies affect health-related quality of life. J Asthma. The Jun; Or (O): OTT-A. doi: 10.5109/07770905. The Jun; Or Covacius Covac
- 2. Cummings AJ, Knibb RC, King RM, Lucas JS. The psychosocial impact of food allergy and food hypersensitivity in children, adolescents and their families: a review. Allergy ۲۰۱۰; ٦٥: ٩٣٣–٩٤٥.
- °. Vieths S, Reese G, Ballmer-Weber BK, Beyer K, Burney P, Fernandez-Rivas M, et al. The serum bank of EuroPrevall—the prevalence, cost and basis of food allergy across Europe. Food Chem Toxicol. Y. A; £7(Suppl 1):17-£.
- Nuraro A, Roberts G, Worm M, Bilo MB, Brockow K, Fernandez Rivas M, Santos AF, Zolkipli ZQ, Bellou A, Beyer K, Bindslev-Jensen C, Cardona V, Clark AT, Demoly P, Dubois AE, DunnGalvin A, Eigenmann P, Halken S, Harada L, Lack G, Jutel M, Niggemann B, Rueff F, Timmermans F, Vlieg-Boerstra BJ, Werfel T, Dhami S, Panesar S, Akdis CA, Sheikh A, EAACI Food Allergy and Anaphylaxis Guidelines Group. Anaphylaxis: guidelines from the European academy of allergy and clinical immunology. Allergy.
- V. Sicherer SH. Epidemiology of food allergy. J Allergy Clin Immunol. Y.11;17V:09£_7.Y.
- A. Ben-Shoshan M, Turnbull E, Clarke A. Food allergy: temporal trends and determinants. Curr Allergy Asthma Rep. ۲۰۱۲; ۱۲: ۳٤٦–۷۲.
- 9. Sicherer SH: Food allergy. Lancet Y.Y, TT::Y.Y-YY.



۱ شارع محمد أمين شهيب ـ مصطفى كامل ـ الاسكندريه ـ مصر تليفون : ۲۰۳/٥٤٥٤٣١٣ ـ ۲۰۳/٥٤٤٢٧٧٦ Fax

- ۲۰۳/٥٤٤٢٧٧٦ Fax





- Downs SH, Marks GB, Sporik R, Belosouva EG, Car NG, Peat JK: Continued increase in the prevalence of asthma and atopy. Arch Dis Child Y. . 1, A&:Y.-Y.
- Upton MN, McConnachie A, McSharry C, Hart CL, Smith GD, Gillis CR, Watt GCM: Intergenerational Y year trends in the prevalence of asthma and hay fever in adults: the Midspan family study surveys of parents and offspring. BMJ Y . . . , TY 1: AA 9 Y.
- Asher MI, Weiland SK: The International Study of Ashma and Allergies in Childhood (ISAAC). Clin Exp Allergy 1990, TA: 07-77.
- Prevalence of parentally perceived adverse reactions to food in young children. Pediatr Allergy Immunol 1999, 10:177-177.
- Woods RK, Stoney RM, Raven J, Walters EH, Abramson M, Thien FCK: Reported adverse food reactions overestimate true food allergy in the community. Eur J Clin Nutr ۲۰۰۲, ๑٦:٣١-٣٦.
- No. Hazell M, Frank T, Frank P: Health related quality of life in individuals With asthma related symptoms. Respir Med Y. T, AY: YYY 1714. 11.
- Natheson M, Raven J, Woods RK, Nr. Thien F, Walters EH, Abramson M: Wheeze not current asthma affects quality of life in young adults with asthma. Thorax Y. Y. OY: NOO-NOV.
- Y. Annett RD, Bender BG, Lapidus J, DuHamel TR, Lincoln A: Predicting Children's quality of life in an asthma clinical trial: What do children's reports tell us? J Pediatr ۲۰۰۱, ۱۳۹:۸۰٤-۸٦٣.
- No. Kiebert G, Sorensen SV, Revicki D, Fagan SC, Doyle JJ, Cohen J, Fivenson D: Atopic dermatitis is associated with decrement in health-related quality of life. Int J Dermatol ۲۰۰۲, ٤١:١٥١-١٥٨.
- Thomson KF, Wilkinson SM, Sommer S, Pollock B: Eczema: quality of life by body site and the effect of patch testing. Br J Dermatol ۲۰۰۲, ۱٤٦:٦٢٧-٦٣٠.
- M: Quality of life, health-state utilities and willingness to pay in patients with psoriasis and atopic eczema. Br J Dermatol 1999, 151:1077-1000.
- Otolaryngol Head Neck Surg Y..., YTT: T9T-T99.



۱ شارع محمد أمين شهيب ـ مصطفى كامل ـ الاسكندريه ـ مصر تليفون : ۲۰۳/٥٤٥٤٣١٣ ـ ۲۰۳/٥٤٤٢٧٧٦ Fax

- ۲۰۳/٥٤٤٢٧٧٦ Fax





- Fineman SM: The burden of allergic rhinitis: beyond dollars and cents. Ann Allergy Asthma Immunol Y.Y, AA:Y-Y.
- Meltzer EO: Quality of life in adults and children with allergic rhinitis. J Allergy Clin Immunol ۲۰۰۱, ۱۰۸:S٤٥-٥٣.
- Sicherer SH, Noone SA, Munoz-Furlong A: The impact of childhood food allergy on quality of life. Ann Allergy Asthma Immunol ۲۰۰۱, ۸۷:٤٦١-٤٦٤
- Yo. B.M.J. de Blok, B.J. Vlieg-Boerstra, J. N. G. Oude Elberink, E.J. Duiverman, A. DunnGalvin, J. O'B. Hourihane, J.R. Cornelisse-Vermaat, L. Frewer, E.N.C. Mills, A.E.J. Dubois (Y··V). A framework for measuring the social impact of food allergy across Europe. A EuroPrevall state of the art paper. Allergy TY (V), VYT-VTV.
- World Health Organization (WHO). Measurement of quality of life in children. Geneva: Division of mental health, 1997 (Report).
- YV. Sicherer SH, Noone SA, Munoz-Furlong A: The impact of childhood food allergy on quality of life. Ann Allergy Asthma Immunol Y..., AV: £71-£72. PubMedView ArticleGoogle Scholar.
- ۲۸. ۱ J. Yun and C. H. Katelaris: Food allergy in adolescents and adults. Internal Medicine Journal ۲۰۰۹, ۳۹: ٤٧٥–٤٧٨.
- Marklund B, Ahlstedt S, Nordström G: Allergy-like conditions and quality of life in adolescents with emphasis on adverse reactions to food. Health Qual Life Outcomes ۲۰۰٤, ۲: ٦٥. ١٠.١١٨٦/١٤٧٧-٧٥٢٥-٢-٦٥PubMed CentralPubMedView ArticleGoogle Scholar
- Landgraf JL, Abetz L, Ware JE: Child Health Questioonnaire (CHQ): A User's Manual. Boston, MA, HealthAct; \\^999.Google Scholar
- Raat H, Botterweck AM, Landgraf JM, Hoogeveen WC, Essink-Bot ML: Reliability and validity of the short form of the child health questionnaire for parents (CHQ-PF^{\(\Lambda\)}) in large random school based and general population samples. J Epidemiol Community Health \(\cdot\)\(\cdo\)\(\cdot\)\(\cdot\)\(\cdo\)\(\cdot\)\(\cdot\)\(\cdot\)\(\cdot\)\(\cdot\)\(\cdot\)\(\cdo\)\
- TY. Avery NJ, King RM, Knight S, Hourihane JOB: Assessment of quality of life in children with peanut allergy. Pediatr Allergy Immunol



۱ شارع محمد أمين شهيب ـ مصطفى كامل ـ الاسكندريه ـ مصر تليفون : ۲۰۳/٥٤٥٤٣١٣ ـ ۲۰۳/٥٤٤٢٧٧٦ Fax

- ۲۰۳/٥٤٤٢٧٧٦ Fax





- Fig. Eiser C, Morse R: Can parents rate their child's health-related quality of life? Results of a systematic review. Qual Life Res Y. V, V: TEV_TOV. V.V.T/A:V.VYTTYYYPubMedView ArticleGoogle Scholar
- Theunissen NCM, Vogels TGC, Koopman HM, Verrips GHW, Zwinderman KAH, Verloove-Vanhorick SP, Wit JM: The proxy problem: child report versus parent report in health-related quality of life research. Qual Life Res 1994, Y: TAYY_T9V.
- ۳٦. Williams C: Doing health, doing gender: teenagers, diabetes and asthma. Soc Sci Med ۲۰۰۰, ۰۰: ۳۸۷–۳۹٦. ۱۰٬۱۰۱۲/S۰۲۷۷-۹۰۳٦(۹۹)۰۰۳٤۰-۸PubMedView ArticleGoogle Scholar
- McKenna K: The impact of food allergy on the daily acitivities of children and their families. Ann Allergy Asthma Immunol ۲۰۰٦, ۹٦: ٤١٥–٤٢١.PubMedView ArticleGoogle Scholar
- Gunnarsson N, Marklund B, Ahlstedt S, Borell L, Nordström G: Allergy-like conditions and health-care contacts among children with exclusion diets at school. Scand J Caring Sci ۲۰۰۰, ۱۹: ٤٦–٥٢. ۱۰.۱۱۱/j. ۱٤٧١-٦٧١٢. ۲۰۰٤. ۲۰۰۹. xPubMedView ArticleGoogle Scholar
- rq. Korol D, Kaczmarski M: Positive family history of allergy in children with hypersensitivity to cow's milk. Med Sci Monit ۲۰۰۱, ۷: ۹٦٦–۹۷. PubMedGoogle Scholar.
- Marklund B\, Ahlstedt S, Nordström G. Food hypersensitivity and quality of life. Curr Opin Allergy Clin Immunol. Y\,\dot\,\dot\ Jun; \(\forall (\tau): \tau\, \forall \Lambda\rangle.\)
- H.SichererMDa. Risk-taking and coping strategies of adolescents and young adults with food allergy. Journal of Allergy and Clinical



۱ شارع محمد أمين شهيب ـ مصطفى كامل ـ الاسكندريه ـ مصر تليفون : ۲۰۳/٥٤٥٤٣١٣ ـ ۲۰۳/٥٤٤٢٧٧٦ Fax

- ۲۰۳/٥٤٤٢٧٧٦ Fax





- SonntagBA,LindsayDillingerBA,KristineMcKennaMS. The impact of food allergy on the daily activities of children and their families. Annals of Allergy, Asthma & Immunology, Volume 97, Issue 7, March 7...7, Pages £10-£71
- Er. Scott H.SichererMD*Sally A.NooneRN, *AnneMuñoz-FurlongBA. The impact of childhood food allergy on quality of life. Annals of Allergy, Asthma & Immunology, Volume AV, Issue 7, December Y..., Pages £71-£75
- Baiardini I, Braido F, Brandi S, Canonica GW. Allergic diseases and their impact on quality of life. Ann Allergy Asthma Immunol ۲۰۰7; ۹۷:٤١٩-٤٢٨.
- Carr AJ, Gibson B, Robinson PG. Measuring quality of life: is quality of life determined by expectations or experience? BMJ Y. 1; TYY: 175 175 T.
- ^{ξγ}. Marklund B, Ahlstedt S, Nordstrom G.Health-related quality of life in food hypersensitive schoolchildren and their families: parents' perceptions. Health Qual Life Outcomes ^γ··[¬]; ^ξ: ^ξΛ.
- وzondheidstoestand met de RAND-٣٦: een handleiding. Groningen: Noordelijk Centrum voor Gezondheidsvraagstukken, ۱۹۹۳.
- ۱۱. Sicherer SH, Noone SA, Munoz-Furlong A. The impact of childhood food allergy on quality of life. Ann Allergy Asthma Immunol ۲۰۰۱: ۸۷: ۱۱-۱۱۶



۱۴ شارع محمد أمين شهيب ـ مصطفى كامل ـ الاسكندريه ـ مصر تليفون : ۲۰۳/٥٤٥٤٣١٣ محمد أمين شهيب ـ مصطفى كامل ـ الاسكندريه ـ مصر تليفون : ۲۰۳/٥٤٥٤٣١٣ - Fax
۲۰۳/٥٤٤٢٧٧٦





الملخص العربى

تاثير الحساسية الغذائية على جودة الحياة لدى المراهقين محمد يوسف عبد الحميد محمود' ، سها محمد سميح الصفتى'

استاذ مساعد التغذية و علوم الاطعمة ، كلية التربية ، جامعة قناة السويس ، الاسماعيلية
 استاذ التغذية ، ، كلية التربية ، جامعة قناة السويس ، الاسماعيلية

اجريت هذه الدراسة بهدف توضيح تاثير الحساسية الغذائية على جودة الحياة لدى المراهقين ،وذلك باستخدام استبيان عن الحساسية الغذائية وجودة الحياة تم تصميمه بواسطة الباحثين ، تم تطبيق الاستبيان على ٤٤١ مراهق مصاب بالفعل بالحساسية الغذائية وفقا لتشخيص طبى، كلهم من محافظة الاسماعيلية ، تترواح اعمارهم ما بين ١٢ و١٨ عام ،منهم ١٠٠ طالب من المدارس الثانوية ،و٤٤ طالب في الفرقة الاولى بكلية التربية بالاسماعيلية ،واشتمل الاستبيان على استمارة البيانات العامة ومقياس الحساسية الغذائية و مقياس جودة الحياة لقياس تاثير الحساسية الغذائية على جودة الحياة لهؤلاء المراهقين المصابين بالحساسية الغذائية ، وتبين من خلال النتائج مدى تاثير الحساسية الغذائية على جودة الحياة لدى المراهقين حيث اشارت النتائج الى وجود ارتباط عكسى بين الحساسية الغذائية وجودة الحياة لدى المراهقين والذى تمثل في انخفاض جودة الحياة بكل جوانبها الاقتصادى والتعليمي والصحى لدى المراهقين المصابين بالحساسية الغذائية .

الكلمات المفتاحية: المراهقون ، حساسية الطعام ، جودة الحياة ، جودة الحياة المرتبطة بالصحة



۱ شارع محمد أمين شهيب ـ مصطفى كامل ـ الاسكندرية ـ مصر تليفون : ۲۰۳/٥٤٥٤٣١٣ عدم ۱۸ مصطفى كامل ـ الاسكندرية ـ مصر تليفون : ۱۳۰۳/٥٤٤٢٧٧٦ Fax ۲۰۳/٥٤٤٢٧٧٦