DOI Number: 10.37506/v14/i1/2020/ijfmt/193079

Psychosocial Consequences of Children with Idiopathic Growth Hormone Deficiency in Baghdad

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Abstract

Study aim: to evaluate psychosocial problems of children with growth hormone deficiency.

Methodology: A cross sectional study, of (80) children from both gender, (4 – 15) years diagnosed with idiopathic growth hormone deficiency, attending endocrine clinics in Baghdad city. Consent form taken from children and their guardians to participate in the study. Pediatric Psychosocial Symptoms Inventory (mood, behavioural, somatic, learning, and personality problems) was used to evaluate children psychosocial consequences. SPSS programme version 23 used for data analyses.

Result: children with growth hormone deficiency experience moderate psychosocial problems, especially personality and behavioural problems.

Recommendation: The researchers recommended details psychological assessment for children with growth hormone deficiency during their routine physical examination and provide suitable psychological support for them and their parent.

Keywords: *psychosocial consequences, growth hormone deficiency*

Introduction

Children with growth hormone deficiency usually followed up endocrine clinics for treated their short stature and improve their quality of life [1, 2, 3], they aware about their physical growth and feel with embarrassment about body differences from peers [4]. As reported in the pediatric studies that children with health disorders may suffer from different negative psychosocial consequences [5] . Those children and their parents influence by children`s short stature, in addition, to the burden of treatment regime [1, 6]. In Baghdad a study conducted in 2009 showed the prevalence of short stature only was 18.7%, while with underweight and short stature was 13.5% [7] . The prevalence of short stature related to growth hormone deficiency was 1\4000 child and 60-80% of them with idiopathic causes [17] . Many previous literature documented adverse effects of the short stature on children`s psychologically and socially [8].

Method and Materials

Research design: cross sectional study used, data was collected from first of May tile the first of November 2018.

Setting: study was carried out in outpatient endocrine clinics at two pediatric teaching hospitals and two specialized centres for endocrine disorders in Baghdad city.

Instrument of the study and procedure: Pediatric Psychosocial Symptoms Inventory PEPSI, parents reported scale, Arabic and English version. It has good reliability, developed from two famous pediatric psychosocial scales: strength and difficulties scale and child behavioral checklist scale by Dr. Al -Ayed and Al-Haider in their study about screening of children`s psychosocial problems in Riyadh [9] . The approval obtained from the ownerships by electronic mail. PEPSI consists of (38) items, with five subscales: Mood symptoms subscale scored from (0-24), Behavioral symptoms subscale scored from (0-27), Learning problems subscale scored from (0-18), Somatic

symptoms subscale scored from (0-24), and Personality characteristics subscale scored from (0-21). Rating from 0-3: no symptoms= 0, rarely= 1, occasionally= 2, and frequently= 3. The total score ranged from 0-114 (0-38 = mild, 39-76 = moderate, 77-114 = severe).

Statistical Analysis

SPSS programme version 23 was used, frequency, percentage, and mean used in data analysis.

Results

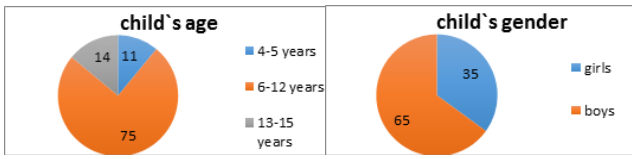


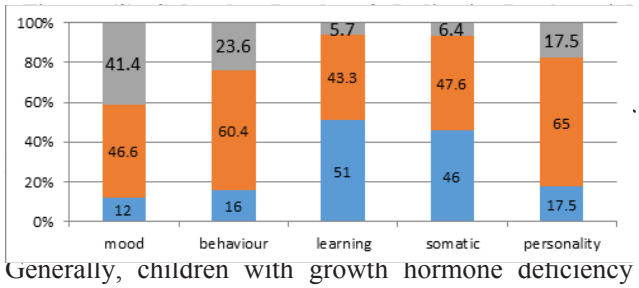
Figure (1) Child`s Age and Gender Distribution

In these figures, the mean age of children with growth hormone deficiency is (8.41±2.7), most of them (75%) at school age (6-12) years, and mostly are boys (65%).

Table (1) Pediatric Psychosocial Symptoms Inventory for children with growth hormone deficiency

Levels of scales Frequency		Study Group	
		Percent	
	Mild	23	28.75
	Moderate	39	48.75
	Severe	18	22.5
	Total	80	100.0

This table reflects that (84.75%) of children with growth hormone deficiency experience moderate psychosocial problems when assessed by PEPSI.



Generally, children with growth hormone deficiency experience moderate mood problems (46.6%); moderate behavioural problems (60.4%); moderate learning problems (43.3%) moderate somatic problems (47.6%); moderate personality problems (65%).

Discussion

The results of the present study showed that (48.75% and 22.5%) of children with short stature related to growth hormone deficiency experience moderate and severe psychosocial problems respectively. Their physical growth (height) interferes with social competence and body differences from normal peers which caused psychological disturbances. A study about psychosocial problems of children with growth hormone deficiency by using the Visual Analogue Scale for Children, support the present findings that those children showed negative self perception concerning physical appearance [6]. Another longitudinal study about terminated treatment of adolescents with growth hormone deficiency showed that, their shortness affects negatively on their psychosocial status and their quality of life [6]. Children with growth hormone deficiency suffer from psychosocial disturbances and their psychosocial functioning depending on various factors especially family support and school adaptation [10]. Short stature associated with psychosocial distress and emotional deprivation [5]. While another study about reviewing the psychosocial consequences of children with short statured that, those children showed negative social experiences but they have not psychosocial problems [5]. However some studies mentioned the benefit of growth hormone treatment on their quality of life and self esteem after one year of successful treatment [5].

The present findings showed the aspects of children psychosocial problems according to pediatric psychosocial symptoms inventory PEPSI (learning, somatic, emotional, behavioural, and personality problems), in all aspects of children psychosocial problems children with growth hormone deficiency scored such problems. Mostly they scored behavioural

and personality problems (60.4%, 65%). As parent reported their children have mood changes, fight with others, fidgety, tell lies, do not listen to rules, feel down, no hobbies, no friends, spend time alone, depend on others, and seem shy.

Most of children experienced teasing or juvenalization, these negative psychosocial consequences related to their shortness. Those children experienced behavioral and emotional problems, low self esteem. They exposure to bullying and could not adopt with their condition, the psychosocial burdens may also play role in developing short stature among some children [11] . Short stature in children can lead to adverse psychosocial impact on those children and affects on their school performance and development of their personality [1] . Children with short stature scored behavioural problems as a result of negative social relationships especially with their peers [6]. Another study to measured behavioral and social problems of (195) children with short stature compared with normal children found that children with short stature experience higher score of school difficulties and behavioral problems [6]. Children with short stature experienced different barriers in their personality development which affects negatively on their school and sport competence [17]. Children`s psychosocial problems and school performance are the most concern of their parent [11] .

As parent reported children with short stature have low social competence when compared with normal children, because of their unsatisfied appearance which affects on the social relationships and development their personality [10]. Those children may face bullying in school or playing with younger children [10]. A study in Japan about psychosocial problems of children with growth hormone deficiency by using Child Behaviour Checklist (CBCL) scale, the result of the study showed those children have higher scored than normal children, they also showed high scored on subscale of Child Behaviour Checklist scale such social problems, anxiety and attention [8]. Previous studies showed school and psychosocial problems due to their appearance, they experience internalize problems and behavioral problems, and showed low health related quality of life[5]. By using child behavior checklist scale for children with short stature, the findings showed those children scored high score of behavioral problems than normal developing children in addition to the somatic, attention, and social problems [14]. In a study about reviewing children with short stature reported that those children scored lower in academic functioning, while another American study reported no differences form normal children [5]. More than half of children with short stature experienced bullying and showed low quality of life [15]. Children with growth hormone deficiency scored low neuropsychological test and impaired social relation [13]. Those children recorded poor academic level due to effects of social relationships in spite of IQ score comparing with normal children [8]

Kranzler and his colleague in their study about psychosocial function of children with short stature that, those children scored externalize problems and inadequate social relationships [12] . Children with growth hormone deficiency showed aggressive behavioral problems, attention, social, emotional problems and maladaptive [15] . Prepubertal short children developed more social, internal, and external problems than children in the same age group [10] . Children with short stature experience behavioral problems [16] . Children with short stature scored low self esteem, bullying, juvinalization, and stigmatization because of their shortness [5] . Previous studies reported those children have academic, internal, external, and behavioural problems due to their shortness [5] . Those children have low quality of life. Psychosocial assessment of children with short stature is important in diagnosis and treatment of those children and well being [5] . Some studies reported those children experienced low quality of life, and internal problems [17] . Child health problems affects negatively on their parents.

Early children diagnosis and treatment reduce the risk of psychosocial problems and financial burden of treatment comparing with untreated children, in addition to the psychosocial advantages [13] . Before treatment regimen the psychological profile should be assessed [10] . The psychosocial services should also provide during treatment of children with growth hormone deficiency, those children experience sad feelings because of their shortness and puberty development delayed [4] the psychological assessment of short adult showed some psychological disturbances. The setting and cultural attribute play a role in developing the psychosocial problems associated with certain health problems [8]. The psychological health services will decrease and children well-being improved [6]. Psychosocial improvement is one of the important goals for treated children with short stature [15]

Conclusion

Children with growth hormone deficiency were experience psychosocial problems, especially behavioral and personality problems.

Financial Disclosure: There is no financial disclosure.

Conflict of Interest: None to declare.

Ethical Clearance: All experimental protocols were approved under the College of nursing, University of Baghdad, Iraq and all experiments were carried out in accordance with approved guidelines.

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