PSYCHOSOCIAL FUNCTIONING AND SELF-PERCEPTION OF CHILDREN AND ADOLESCENTS TREATED WITH GROWTH HORMONE

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Background

Coping with a chronic medical condition requiring prolonged treatment, such as Growth Hormone (GH) treatment, might have impaired function in the areas of relationships with others and impaired self-esteem.

Methods

It is a prospective study with the use of validated questionnaires Self Perception Profile (SPP), the Greek version. The study group consists of 272 children and adolescents (183 boys and 89 girls) diagnosed with (isolated) Growth Hormone Deficiency (GHD) with no other underlying disease, treated with rhGH for at least six months (prior to the psychological tests). The mean age of the sample is 13,7 years (SD=5.5years) and the mean duration of treatment 3.4 (3.1) years. The study was conducted in the Endocrinology Department of one of the two main Pediatric Hospitals in Athens, from November 2013 to January 2015. Student's t-tests and analysis of variance (ANOVA) were computed for the comparison of mean values. Pearson correlations coefficients were used to explore the association of two continuous variables

Results

Table1: Demographics

		N	%
Gender	Boys	183	67.3
	Girls	89	32.7
Maternal educational level	<12 years	132	51.6
	>12 years	124	48.4
Paternal educational level	<12 years	132	55.2
	>12 years	107	44.8
Residence	Rural	69	25.4
	Urban	203	74.6
Living with both parents	No	27	9.9
	Yes	245	90.1
Family Affluence Scale (FAS)	Low	9	3.3
	Medium	143	52.8
	High	119	43.9

Age (years), median range ±SD	13.7±5.5
Duration of GH treatment (years) , median range ±SD	3.4±3.1

Objectives

To identify key factors that influence self-perception and well-being in children and adolescents on GH therapy.

The Self Perception Profile Questionnaire

➔The SPP assesses domain specific judgments by children and adolescents of their personal competence as well as a global perception of their worth or esteem as a person. The items are organized in the following five scales:
1) social competence,
2) athletic competence,
3) physical appearance,
4) behavioral conduct
5) global self-worth.
➔Patients responded on a 4-point rating scale written in a "structured alternative format". First, they had to decide which of two statements relating to how they feel in specific situations was fit to them and then to indicate whether the statement they selected was "really true for me" or short of true for me". Higher scores reflect more positive self-concepts.

🌐All scores were positively correlated with each other indicating the close relationship among all studied parameters (p<0.050).

Table 2: Scores of SPP

	MEAN	STANDARD DEVIATION
Emotional relationships	2.73	0.61
Relationships with peers	3.13	0.53
Relationships with parents	3.03	0.60
Sport ability	3.16	0.66
Physical appearance	2.83	0.60
Attitude	2.96	0.57
Close friends	3.00	0.62
Self esteem	3.28	0.50

➔Significant interaction effect was found between **duration of treatment** and relationships with peers (p=0.008), physical appearance (p=0.035), close friends (p=0.003) and self esteem p=(0.020). Therefore, increased treatment duration leads to better relationships with peers and close friends, better percept of physical appearance and greater self-esteem.

➔Comparing to **adolescents, children** had significantly higher scores in dimensions "relationships with parents", "physical appearance", "attitude" and "self esteem" and lower scores in dimension "relationships with close friends".

➔**Males** were found to have better relationship with peers, better athletic competence and worse attitude than females (p=0.010; p=0.013 and p=0.023 respectively).

➔Participants living in **urban areas** had significantly better relationships with their parents compared to those living in **rural areas** (p=0.034).

➔Participants **living with both parents** had significantly worse relationships with the opposite sex (p=0.039).

➔**Mothers' high educational level** was positively related with participants' self-esteem and opinion about their physical appearance (p=0.025 and p<0.001 respectively).

➔ **Fathers' low educational level** was negatively associated with patients' attitude (p=0.043).

Conclusions

Children on this study score above average concerning relationships with parents and peers and have good athletic competence. This seems to reflect untroubled development for GH treated participants. However it is of concern to note that our results confirm that personality functioning of GH treated children is influenced by duration of treatment, gender, parental educational level, residence and family status. These data may help guide GH therapy based on pretreatment characteristics and early growth response.