

ASSESSMENT OF COMPLIANCE WITH GROWTH HORMONE (GH) THERAPY.

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Introduction

Treatment compliance is one of the most important practical aspects in long-term treatments such as GH therapy.

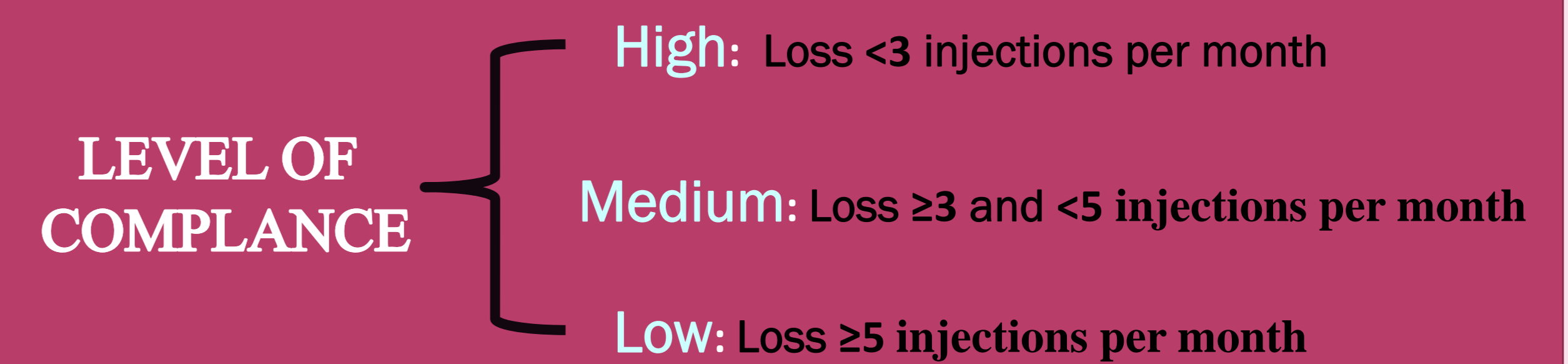
Aim

To evaluate the level of compliance to GH therapy and its association with treatment duration and patients' demographic factors.

Methods

A prospective study with the use of validated questionnaires was conducted in the Endocrinology Department of one of the two main Pediatric Hospitals in Athens. The study group included 66 children (43 boys), diagnosed with Growth Hormone Deficiency (GHD) with no other underlying disease. Mean age 13.2 (2,5)years and mean duration of treatment 3.5 (3,2)years. For the comparisons of proportions chi-square test was used while Man-Whitney test was used for continuous variables. Multiple regression analysis was used with stepwise methods.

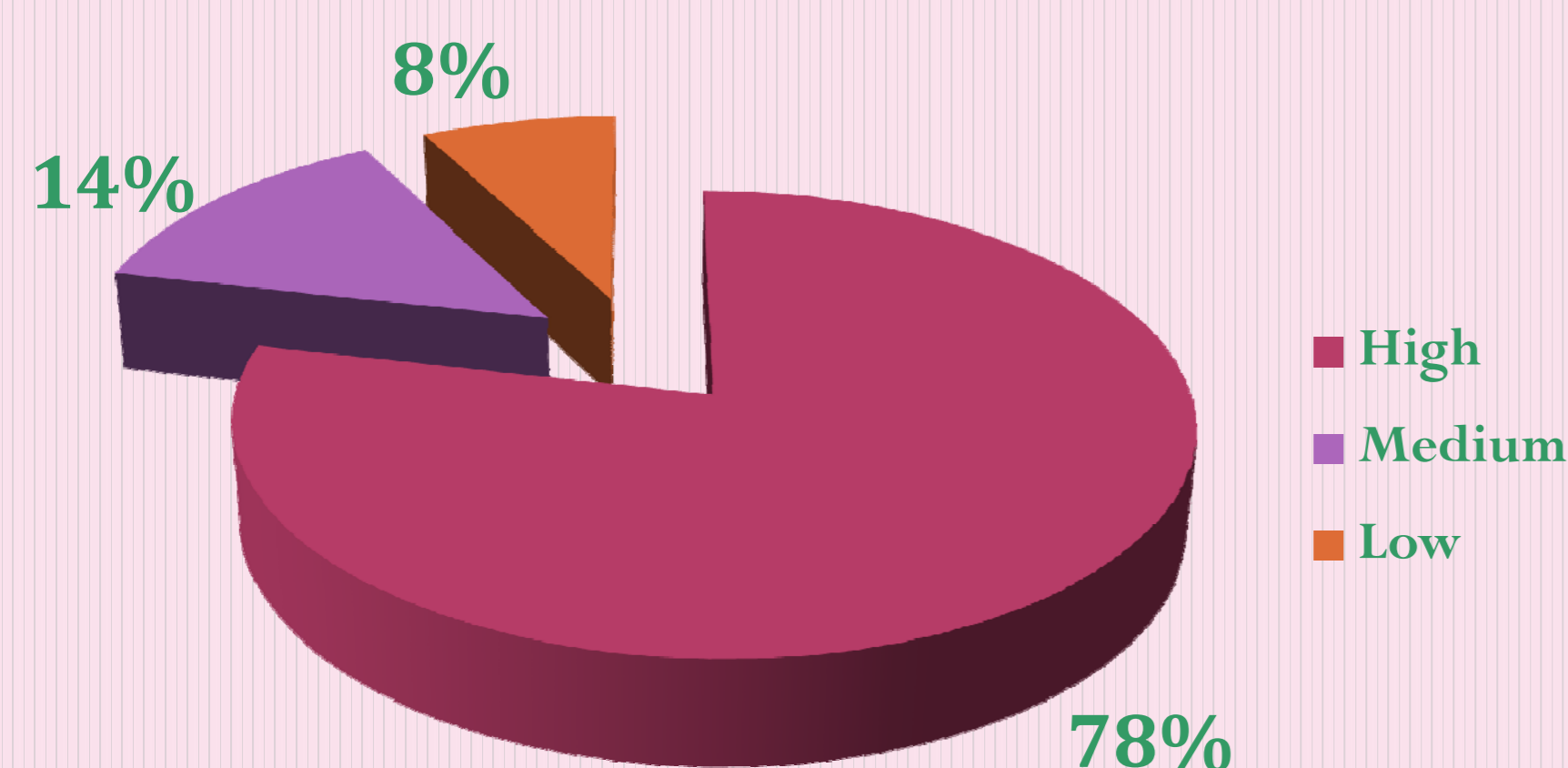
Determination of level of compliance



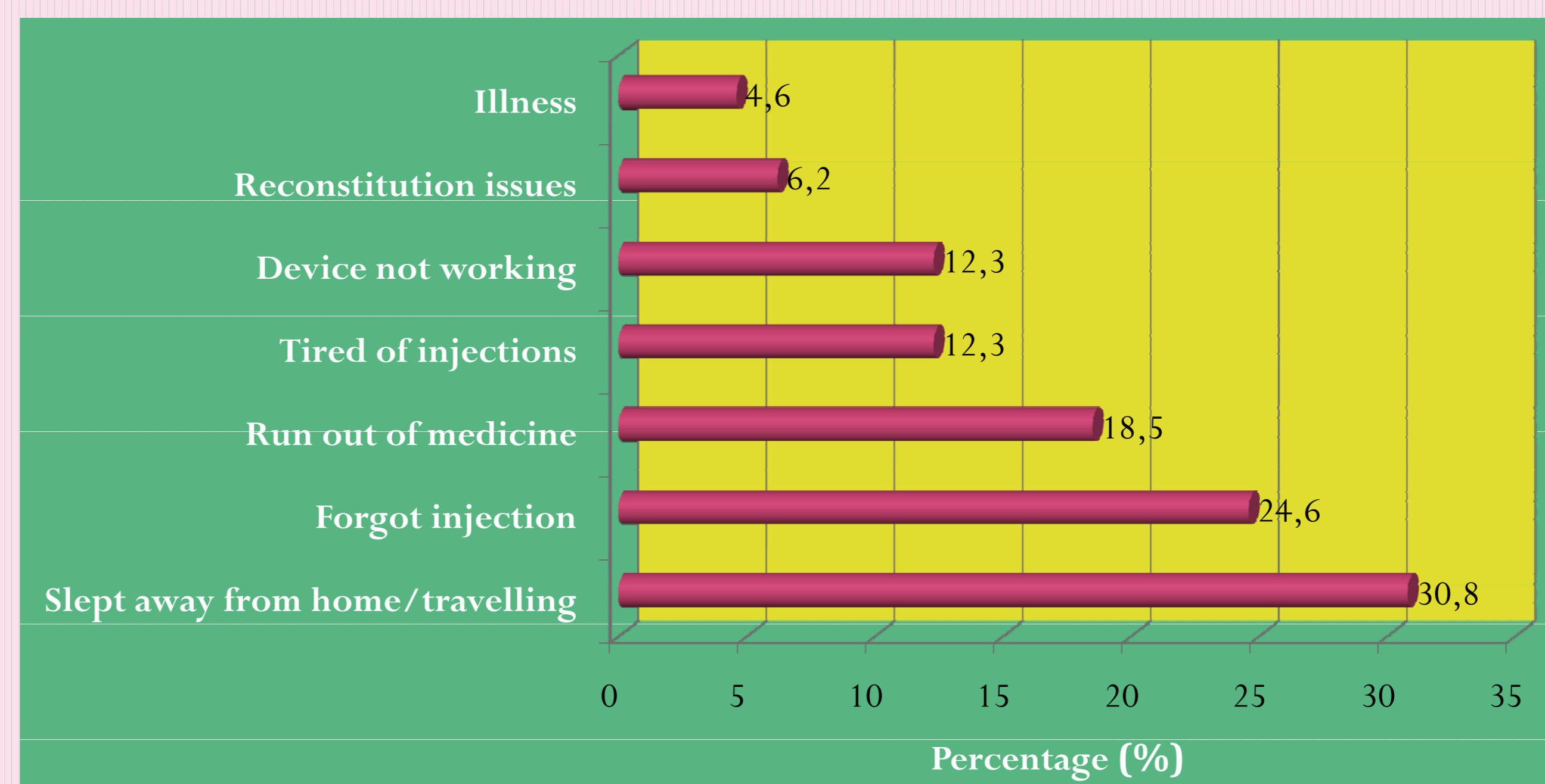
Results

The level of compliance with GH treatment was high in the majority of children (78.5%). However, in 66.2% of the cases have missed at least one dose during last month and this percentage was significantly higher in cases that the father had a low level of education (76,9% vs 50%, p=0.025). Moreover, children with high level of compliance had almost half duration of treatment (2.9 years (SD=2.9)) as compared to those with medium/low level of compliance (5.5years (SD=3.8)) (p=0.005).

Level of compliance



Most common reasons for missing injections



The most common reason for missing a dose was being away from home (30%) followed by forgetfulness (24.6%).

Table 1: Demographic characteristics

		N	%
Gender	Boys	43	65.2
	Girls	23	34.8
Maternal educational level	<12 years	40	60.6
	>12 years	26	39.4
Paternal educational level	<12 years	39	59.1
	>12 years	27	40.9
Responding parents sex	Male	44	66.7
	Female	22	33.3
Administration of injections	Child (alone)	22	33.3
	Child and parent/other	23	34.8
	Parent/other	21	31.9
Injection device	Manual pen	43	65.2
	Automatic pen	23	34.8
Age (years), median range ±SD		13.2±2.5	
Duration of treatment (years), median range ±SD		3.5±3.2	

The majority of the children (76%) who were self injected considered the use of injection device easy/very easy. These children had almost double duration of treatment as compared to the rest (4.0years (SD=3.7) vs 1.9 years (SD=3.7), p=0.029).

The most difficult parts concerning the injection technique were considered to be preparing the mixture and releasing the liquid under the skin.

Only 54.6% of the cases were confident enough that they injected themselves properly.

Children and parents who were satisfied from their training were 5fold more likely to have a high level of compliance as compared to those who declared the opposite (odds ratio: 5.07, 95% CI:1.2-25).

Conclusions

Level of compliance seems to be affected positively from parents' educational level and satisfaction from training and to be negatively correlated with treatment duration. The high level of uncertainty concerning the proper technique, reveals the need for continuous counseling of children and their parents regarding the injection technique. Furthermore, the need for positive reinforcement of good practices is important.

Noncompliance should be dealt with, by problemsolving, where patient and physician mutually analyze the specific barriers to compliance and agree on a common solution.

