

# The Benefit of a Universal Screening Program for Lipid Disorders in Two to Ten Years Old Lebanese Children.

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**Introduction:** Dyslipidemia has been recognized as a risk factor for cardiovascular diseases. While the development of atherosclerotic lesions begins in childhood and progresses throughout life, data on the prevalence of dyslipidemic children in Lebanon is lacking.

Category	Acceptable mg/dL (mmol/L)	Borderline mg/dL (mmol/L)	High
TC	<170 (4.4)	170 to 199 (4.4 to 5.2)	200 (5.2)
LDL-C	<110 (2.8)	110 to 129 (2.8 to 3.3)	130 (3.4)
Non-HDL-C	<120 (3.1)	120 to 144 (3.1 to 3.7)	145 (3.8)
ApoB	<90 (2.3)	90 to 109 (2.3 to 2.8)	110 (2.8)
TG			
•0 to 9 years	<75 (0.8)	75 to 99 (0.8 to 1.1)	100 (1.1)
•10 to 19 years	<90 (1 mmol/L)	90 to 129 (1 to 1.5)	130 (1.5)
Category	Acceptable	Borderline	Low
HDL-C	>45 (1.2)	40 to 45 (1 to 1.2)	<40 (1)
ApoA-1	>120 (3.1)	115 to 120 (3 to 3.1)	<115 (3)

Guidelines for screening pediatric dyslipidemia according to the 2011 Expert Panel Integrated Guidelines for Cardiovascular Health and Risk Reduction in children and Adolescents

Hypertension	Familial history of CHD
Passive smoking	Familial dyslipidemia
BMI > 95 <sup>th</sup> percentile	Familial diabetes
Child with moderate to high risk medical condition of CVD (DM, CKD, Kawasaki)	

## Objectives:

This study was conducted to assess the benefit of a protocol for universal screening for lipid disorder in Lebanese children aged between two and ten years old.

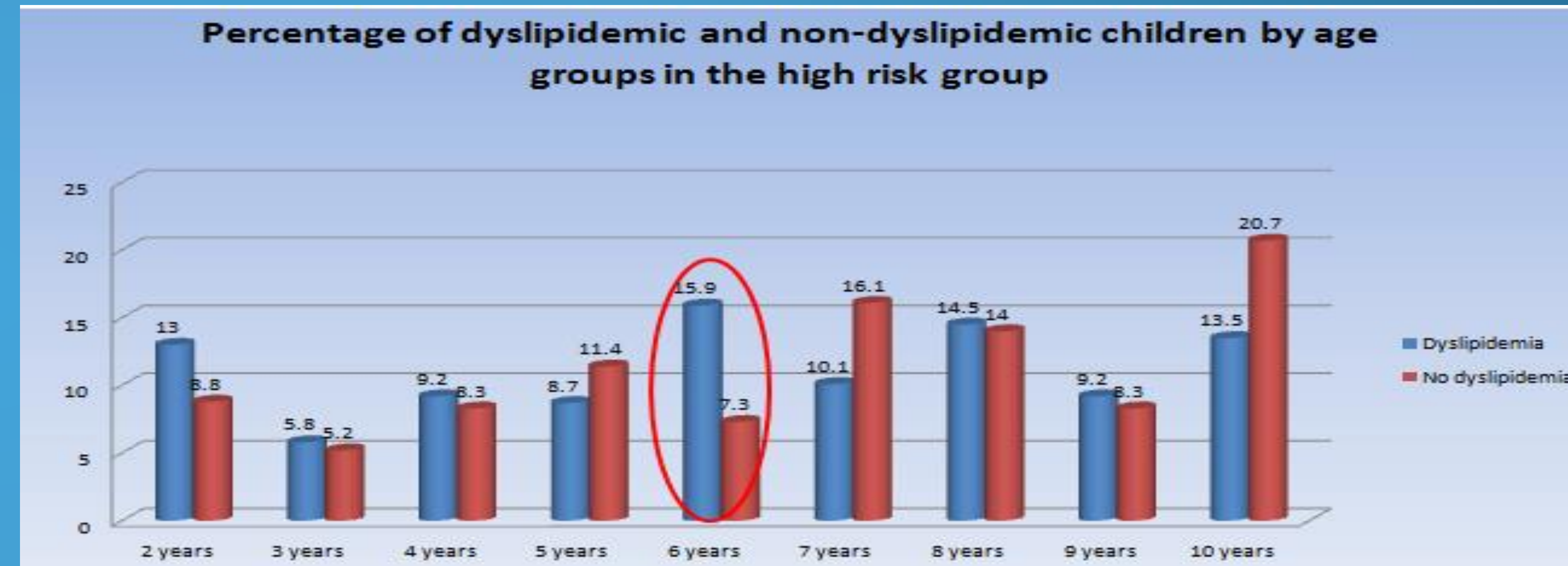
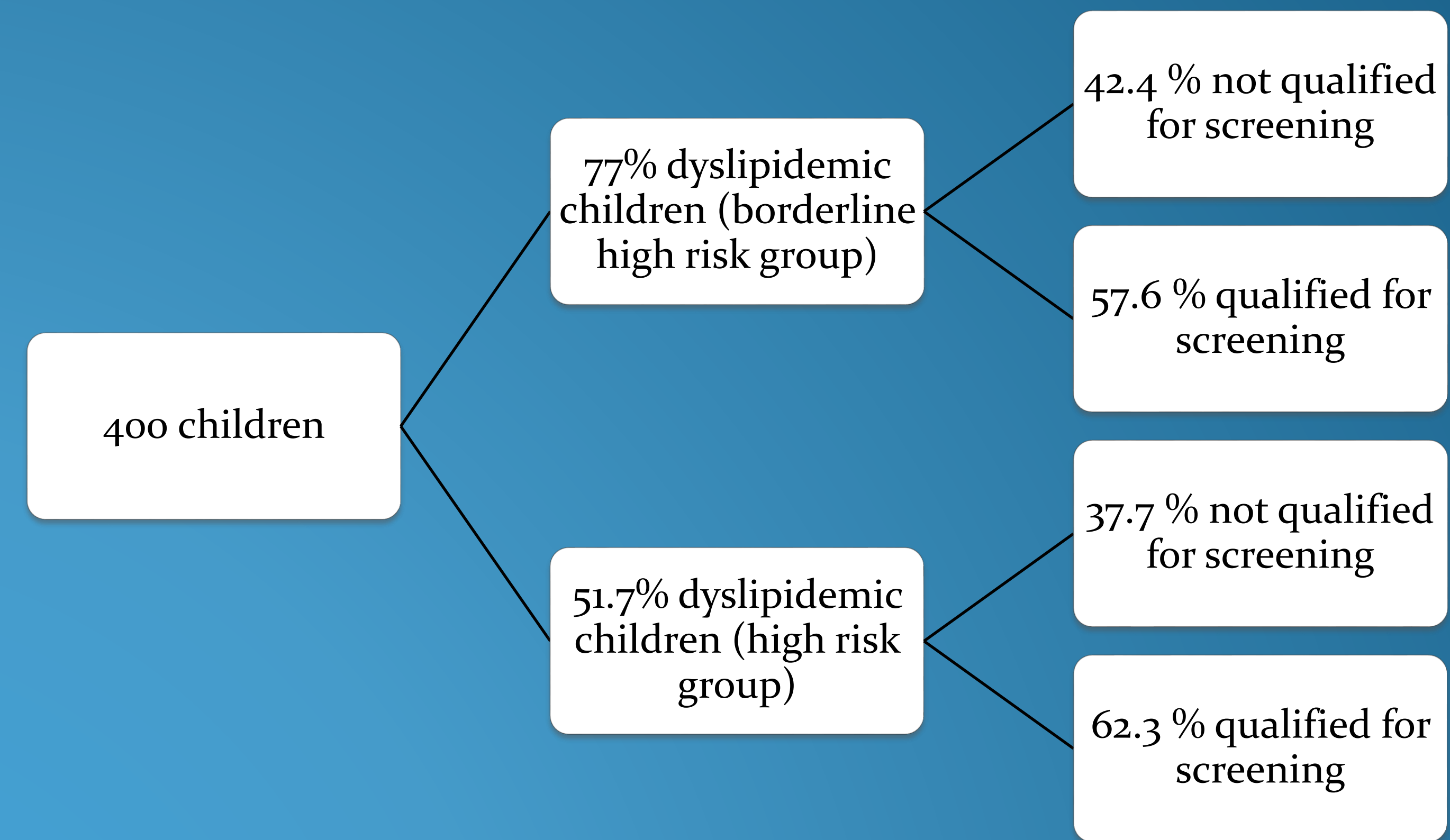
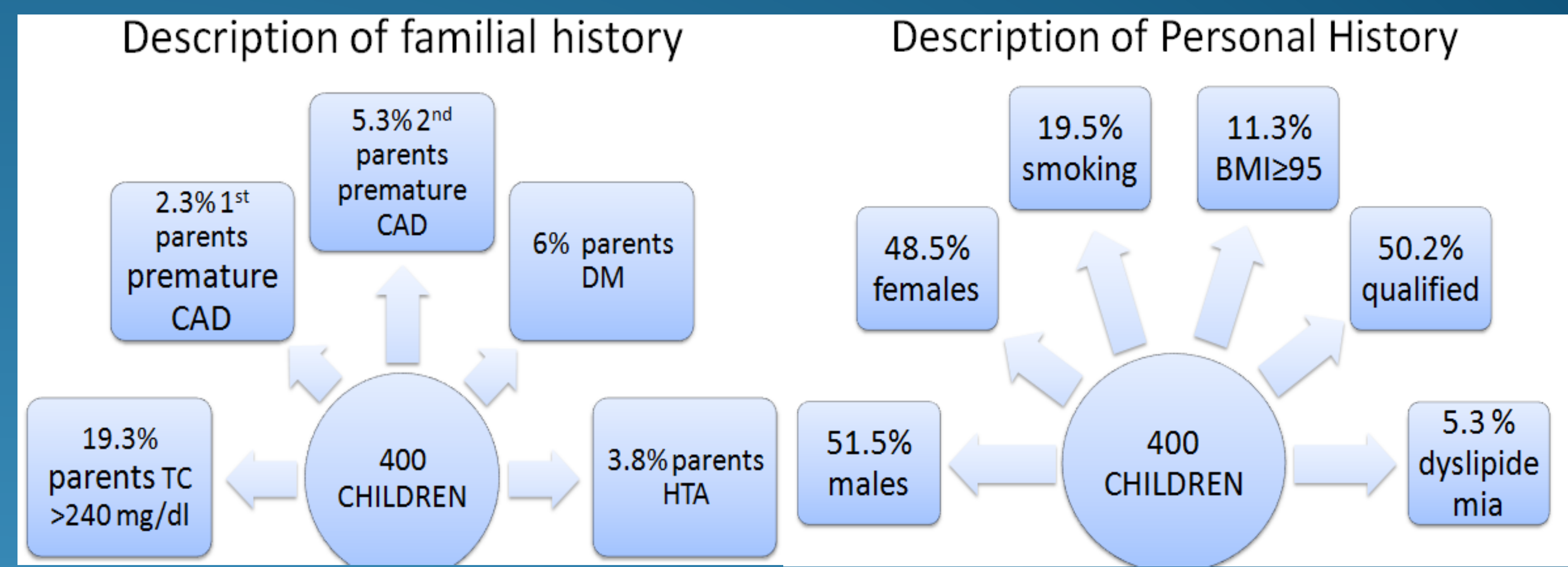
**Materials and Methods:** A total of four hundred children aged 2 to 10 years old (51.5% boys) were included in the study. The subjects were recruited from private pediatric clinics after parental consent. Fasting total cholesterol (TC), triglycerides (TG), low density lipoprotein (LDL), high density lipoprotein (HDL) levels were measured and non-HDL cholesterol was calculated. The values were categorized according to 2011 Expert on Integrated Guidelines for Cardiovascular Health and Risk Reduction in Children and Adolescents.

## Retrospective descriptive Study

Age	Parents with HTA
sex	Parents with DM
BMI	Parents with dyslipidemia
Passive smoking	Parents with CAD or equivalent

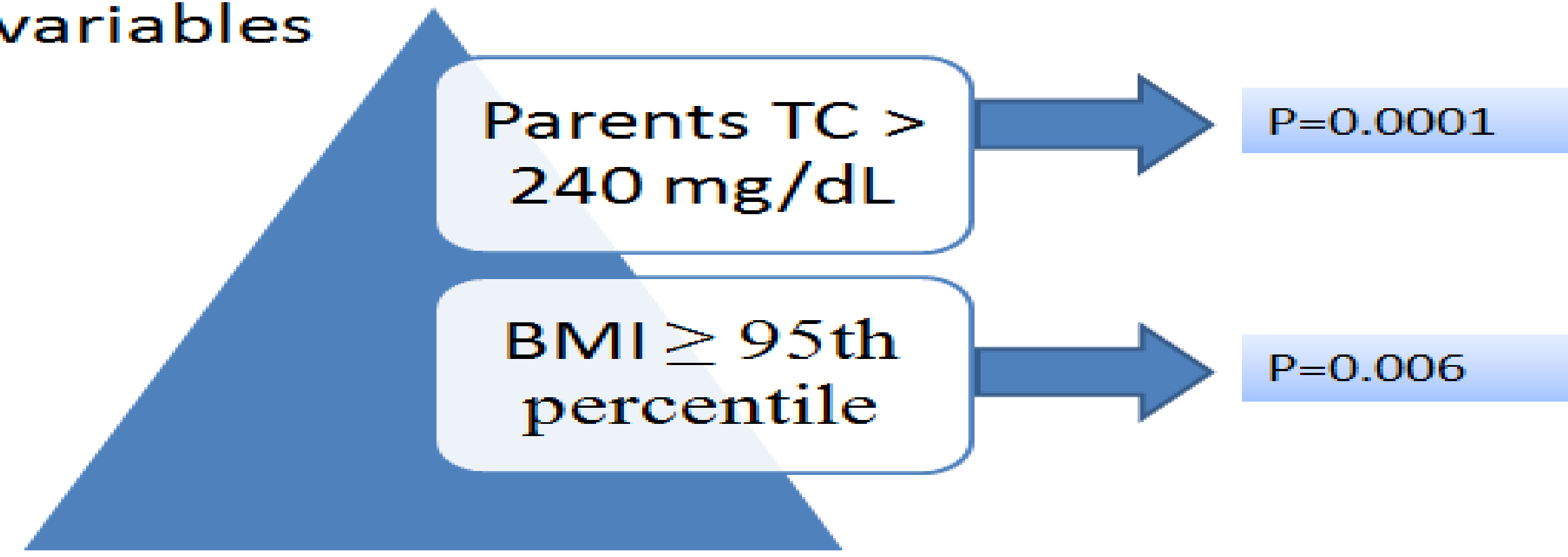
**Conclusions:** It is preferable to review the latest pediatric dyslipidemia screening guidelines by performing a universal screening program since a third of our dyslipidemic Lebanese children have been missed.

## Results:



## Bivariate analysis in high risk group.

### Significant variables



Independent variables	Dyslipidemia	No Dyslipidemia	P value
Qualified	62.3	37.3	0.0001
Non qualified	37.7	62.7	
Variables	Parents TC>240	Parents TC<240	P value
TC <170	31.5	57.9	0.0001
TC 170-199	27.3	27.6	
TC >200	40.3	14.6	0.0001
Non HDL <120	31.2	61	
Non HDL 120-144	24.7	21.1	
Non HDL >145	44.2	18	0.0001
LDL <110	41.6	69.3	
LDL 110-129	16.9	17	
LDL >130	41.6	13.6	
Independent variables	BMI >95%	BMI <95%	P value
TG <75	15.6	50.7	0.0001
TG 75→99	24.4	21.1	
TG >100	60	28.2	

Whereas others variables TC, HDL, Non ND, LDL were not significant