# Migraine Headache in the Pediatric Population of Saudi Arabia: Prevalence and Risk Factors.

Ghada AlHindi, Nada Dammas, Fawaz AlHussain, Fahad AlBashiri, Muath AlBalawi,Manar AlShamari, Yousef Mohammad

Department of Internal Medicine, King Saud University, Riyadh, Saudi Arabia

Deanship of Scientific Research

## INTRODUCTION

Headache is one of the most common complaints by the pediatric age group. Additionally, its negative impact on the child's life and school performance cannot be overestimated. Data on the prevalence and risk factors of this agonizing condition would help the community health force to rationally and properly address its management. Unfortunately, very scarce data exist on the prevalence of headache and its associated risk factors in the pediatric population of the Kingdom of Saudi Arabia.

## OBJECTIVES

1. Measuring the prevalence of migraine headache in the pediatric population of Saudi Arabia.
2. Identifying the risk factors that will lead to migraine headache in school children.

## METHODOLOGY

- We conducted this study to determine the prevalence of headache and its associated risk factors in the pediatric population of Saudi Arabia.
- This is a cross-sectional study that was conducted from October 2015 to August 2017. Children (6-18 years) and their parents visiting major shopping malls in Riyadh, who agreed to participate in the study, were interviewed to complete a set of questions related to headache and its risk factors.
- We strictly adhered to the ICHD-3 beta criteria for the diagnosis of pediatric headache. The sample size was determined with the prior knowledge that the prevalence rate of migraine and headache in Saudi school children is somewhat similar to Western countries.

## RESULTS

1455 subjects completed the questionnaire. The data revealed a headache prevalence of 36% (n=528) and it was more prevalent in females 68% (n=359) than in males 32% (n=169). The mean age of the subjects who suffered from headache was 14 years old (6-18 years old). Migraine constituted 16% (n=232) of all headaches, of which 13%(n=186) have associated aura. Stepwise multivariate logistic regression showed that female gender, use of electronic devices, bullying at school, Vitamin D deficiency, snoring, and depression are independent risk factors for the development headache in this age group population.

| | | Headache | | |
|---|---|---|---|---|
| | | No N=927 | Yes N=528 | P-value |
| Gender | Female | 437(47.1) | 359(68.0) | <0.0001 |
| | Male | 490(52.9) | 169(32.0) | |
| Age | Mean (±SD) | 12.53±3.93 | 14.40±2.94 | <0.0001 |

| | | Migraine Headache | | |
|---|---|---|---|---|
| | | No N=296 | Yes N=232 | P-value |
| Gender | Female | 194(65.5) | 165(71.1) | 0.17 |
| | Male | 102(34.5) | 67(28.9) | |
| Age | Mean (±SD) | 14.07±3.04 | 14.82±2.75 | 0.003 |

| | | Migraine Headache with Aura | | P-value |
|---|---|---|---|---|
| | | No N=76 | Yes N=186 | |
| Gender | Female | 56(73.3) | 130(69.9) | 0.54 |
| | Male | 20(26.3) | 56(30.1) | |
| Age | Mean (±SD) | 14.34±2.98 | 14.89±2.69 | 0.15 |

## CONCLUSION

Headache in the pediatric population of Saudi Arabia is quite prevalent and similar to that of other populations. Multiple modifiable risk factors have been identified. Hence, urgent measures must be implemented in addressing these factors

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For Inquiry: Ghadakhalid_2006@Hotmail.com