TEXT

INTRODUCTION

Factors that affect physical growth of a child are numerous, ethnic origin being one of them. Using existing growth charts to assess physical development of indigenous children of the North leads to ambiguity: pediatricians must change the diet in boarding schools because children have low weight and/or short stature, but to change the diet means to face many associated health issues. The aim of this study is to assess the appropriateness and feasibility of establishing the regulatory frameworks to monitor the growth of indigenous children from birth to young adulthood.

METHODS

We have analyzed data collected in the years 1996 – 2017 in the Yamal-Nenets Autonomous region (total number of Nenets, Khanty and Slavic children 5940, age 3 – 17 years) and in Yakutia (total number of Sakha, 5 ethnic groups of indigenous and Slavic children 278793, age 0 – 17 years). We used standard methods of parametric statistics. The objective of this study is to assess the appropriateness and feasibility of establishing the regulatory frameworks to monitor the growth of indigenous children from birth to young adulthood.

RESULTS

**BODY LENGTH AND BODY MASS AT BIRTH (boys&girls)**

<table>
<thead>
<tr>
<th>ETHNIC GROUP</th>
<th>BODY LENGTH (cm)</th>
<th>BODY MASS (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slavic (n=171)</td>
<td>51.8 ± 2.3</td>
<td>3409 ± 460</td>
</tr>
<tr>
<td>Sakha (n=193)</td>
<td>52.8 ± 2.4</td>
<td>3511 ± 511</td>
</tr>
<tr>
<td>Indigenous (n=160)</td>
<td>51.8 ± 3.3</td>
<td>2256 ± 484</td>
</tr>
</tbody>
</table>

**BODY WEIGHT AND BODY HEIGHT IN CHILDREN AGED 4 – 17 YEARS**

Natives = indigenous children of Yamal and Yakutia (9 ethnic groups, boys&girls)

Migrants = 90%: Slavic, Tatars, Bashkirs, Jews, Chechens, Ingush

**Systolic (SYS) and Diastolic (DIA) Arterial Pressure in Children-inhabitants of Yakutia (boys&girls)**

**CONCLUSION**

Our data support the appropriateness and feasibility of establishing the regulatory frameworks for studied indigenous populations. Understanding that racial/ethnic-specific charts are now not recommended because the differences in growth among racial/ethnic groups are shown to be the result of environmental rather than genetic influences, we still must conclude that population-related charts may not be optimal for indigenous children. Customized growth charts adjusted for race/ethnicity are more appropriate. The use of a single standard is not justified and the claim that "child populations grow similarly across the world’s major regions when their needs for health and care are met" is probably just an assumption.