

Can be oral breathing causing attention deficit and poor school performance?

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SUMMARY:

The attention deficit and poor school performance in school-age children can be associated with respiratory problems, primarily to the mouth breathing problems, was analyzed some works related to student performance and the buccal respiratory syndrome, concluding that low school performance can have a direct relationship with the mouth breathing, affecting mainly the lower social stratum.

RESUMEN:

El déficit de atención y el bajo rendimiento escolar en niños en edad escolar puede estar asociado a problemas de tipo respiratorio, primordialmente a la respiración bucal, se analizan distintos trabajos relacionados con el rendimiento estudiantil y el síndrome de respirador bucal concluyéndose que el bajo rendimiento escolar puede tener una relación directa con la respiración bucal, afectando mayoritariamente a los estratos sociales más bajos.

RESUMO:

O déficit de atenção e desempenho pobre da escola em crianças em idade escolar pode ser associado com o tipo respiratório, principalmente problemas respiratórios a boca, analisou vários trabalhos relacionados ao desempenho

dos alunos e a síndrome do respirador bucal, concluindo que o desempenho escolar baixo pode ter uma relação direta com respirar a boca, afetando principalmente os estratos sociais mais baixos.

One of the concerns of parents with their children at the time of students is school performance, sometimes teachers say parents "your child does not care classes", "the child should pay more attention to his duties" "the child has poor performance, should do more" and many other observations when performance is below the level of the course.

One of the observations of medical pediatricians regarding the decrease in size of growth and famished body of some children, focuses on the mouth breathing are often referred to the specialist for your consultation, but rarely the referral is to the dentist or orthodontist, specialist physician, can rule out respiratory problems in the upper tract that can affect the mouth breathing and is the right person to diagnose and treat these problems , the mouth breathing, also known as "mouth breathing syndrome", either by blockage or by habit, it can produce serious alterations that affect the child both aesthetic, functional, as mentally¹, but this is not corrected only removed obstructions or treating allergic States, we must return to the nasal route breathing normal function and this part goes to the pediatric dentist and orthodontist.²

The literature reveals numerous investigations from the psychiatric or psychological standpoint in children with poor school performance or attention deficit; numerous questionnaires was elaborated to determine the problems in these children, questions such as: do have difficulty addressing the details during schoolwork or other activities?. he makes errors by mistake?, do he have trouble focusing and sustaining attention in tasks or games?, He gets distracted easily by any stimulus?, does seem to not hear what is said you?, do he have difficulty to plan and organize their tasks? They targeted a deficit of attention, averages d problem professional notes in relation to the majority of the course can tell us if your child has poor school performance relative to peers, but all of these studies must be complemented with a medical-dental test to determine if the child has nasal respiratory deficit.

Is considered normal breathing when air enters freely through the nose with a simultaneously closing of the oral cavity, air circulates from the nostrils into our lungs, while the mouth creates a negative pressure between the tongue and the hard palate at the moment of inspiration, the tongue rises and is projected against the palate This pressure creates a positive stimulus for the development of the palate and dental arches and therefore best facial development.

The etiology of mouth breathing can be varied, buccal respirators may occur as a result of the following causes functional blockages, bad breathing habit, and ligamentous hypermobility.³

Trevino and cols. They point to "physical consequences on a child who has oral breathing are part of a specific syndrome that is called" long face syndrome". The major inconvenience of these patients are: feeling of lack of air, fatigue during physical activity, pain in they neck or back, alterations of taste and smell, halitosis, dry mouth, daytime sleepiness, as well as abundant salivation to be talking. Also reported changes in the pattern of sleep, irritability, difficulty in concentration, as well as decrease in achievement"⁴

Studies by various researchers associated with mouth breathing low school performance, clearly indicate the close link between this disease and low student performance in children in different social strata.

The work carried out by Trevino et al.⁴ in the Regional Center of Allergy and Immunology clinic of the University Hospital in Monterrey, NL, on 107 patients indicate that in the academic area, 92% of children with failing grades belonged to the Group of oral respirators. Good grades in conduct were more frequent in that nasal respirators in oral (80% vs 20%,) ($p < 0.001$). Vera et al reported same results in relation to school performance. In a population of 80 children studied in the Santa Barbara school and in the Rehabilitation Institute of the language, CATIA in Caracas, Venezuela⁵

Numerous published works related to respiratory disorders of children, Obstructive Sleep Apnea (OSA) syndrome and other disorders may be involved in the etiology of attention deficit and hyperactivity in some children. Rhodes et al. presented a report showing an inverse correlation between learning/memory and sleep apnea/hipo-apneas in 14 children ⁶

Chervin et al., conducted a study which surveyed parents of children between 2 and 18 years old, with and without attentional deficit, with questions of conduct, snoring, restlessness during sleep and drowsiness during the day, finding an association between respiratory problems associated with sleep and snoring, with higher levels of attention deficit and hyperactivity ⁷

In Venezuela, the distribution of the population is composed of 5 social strata:

Stratum A: population with better conditions of life, known socially as class high, academics, financiers, bankers, from homes with own fortune inherited or acquired, with homes in optimal sanitary conditions in areas of luxury. It corresponds to approximately 1% of the population.

Stratum B: population with good levels of life, but without reaching the levels of stratum A. academics, senior technicians, medium-sized traders or producers, from homes living earnings and benefits, or professional fees with housing with optimal sanitary conditions, in environments with luxurious excess and sufficient spaces. It is approximately between 4 to 7% of the population.

Stratum C: population with possibilities of meeting basic needs, as well as intellectual

development and ability to enjoy cultural benefits: employees with or without University profession, technical media, small traders or producers who depend on their salary or monthly income, with dwellings with good sanitary conditions, but which do not reach the conditions of I and II levels. It is approximately 12-15%

Stratum D: population in relative poverty because not enough satisfactory living standards of previous levels, are social groups vulnerable to economic changes, deprived of cultural benefits: specialized workers and workers in the informal sector, with primary complete and from households that depend for their subsistence wage weekly, daily or hourly rate, with dwellings with some deficiencies in health conditions. It is approximately 30 to 40% of the population

Stratum E: population in critical poverty, are unable to meet basic needs: unskilled workers and the informal sector (primary incomplete) from many of them home with illiterate parents, depend on variable income well below the basic food basket dependent many times of aid or donations for the subsistence, living in farms or homes with markedly inadequate sanitary conditions. It is approximately between 20 and 35% of the population.

In the work carried out by the author and his collaborators at educational institutions in different social strata is has been able to demonstrate that there is a relationship between oral breathing and poor school performance, finding a more marked difference in the lower strata. Analyses were performed to determine oral respirators children in three schools covering levels A, B, C, and D.

In the study in an institution of social high and medium-high stratum took a sample of 32 students in this institution, diagnosed with oral breathing syndrome to be observed by the teacher a child with difficulty learning immediately remanded to an orientation service where are the necessary tools to parents to avoid poor performance of the child coincidentally attention is usually focused on children who have mouth breathing habits, who require more support from teachers and parents or representatives, it is important to highlight that the sample students trainees in such College belong to strata social classes A, B and C What are the upper classes and half Venezuelan high. This reflected evidence that they collaborate with the school performance of children. Events such as: a balanced diet, extracurricular activities, homes with rooms equipped for optimal rest of children, means of transport that ensure regular attendance to classes, and especially, parents with the willingness and interest about the performance of their children, as well as also worried about the health of their children, which attend to medical consultations and regular checks , with optimal health States, allow balance in their studies and compensate deficiency of learning that these children may be present.

The second group corresponds to an educational institution where children come mostly belonging to the stratum C.¹³

We were studied 42 children, 11 of these, had physical characteristics of mouth breathers, 7 children have an acceptable performance at school, 3 children school performance regular and only 1 child was reported by parents as chronic allergic (hence buccal breathing), night snoring, with attention deficit grade IV, clinically diagnosed and properly medicated, just that for unknown reasons, mother manifest that the child had not complied with such treatment. The teacher reveals that the child is older among peers has attention deficit, is distracted and don't follow instructions when carrying out works in the classroom, by this reason was referred to consultation with an Otolaryngologist, to assess and treat the child.

The third group studied ¹⁴ corresponds to study at an educational institution with children belonging to levels C and D whose representatives make up the majority population, were studied 53 children of which 45% (24 children) presented oral breathing.

Of the 53 subjects studied 26% showed low ratings (14 students), 42% of these (10 students) were respirators oral and 4 nasal respirators.

The percentage of children oral respirators with poor school performance was significantly greater than the children who had a habit of breathing right.

To the extent that were analyzed the results of each work, became more evident the incidence of problems of mouth breathing in the school performance in the lower strata, there that we can infer that the educational, social and economic levels in the different strata may influence on the results of the work and that insofar as we descend in different strata the incidence of mouth breathing disorders are higher performance student.

Were not analyzed subjects located in the stratum E, in which a high percentage of the population is located and where the dropout is higher and the social and health problems have greater incidence by their living conditions, with low level of education parents and children without appropriate conditions with many economic needs, where subsistence needs are higher there of respiratory problems, habits and malocclusions are the background, the important thing is to survive.

CONCLUSIONS:

Based on the literature review and the work carried out, we can conclude that the mouth breathing day and night, such as Obstructive Sleep Apnea (OSA) syndrome and other disorders may be involved in the etiology of attention deficit and hyperactivity in some children and directly influencing achievement, if we add this to that described by various authors in reference to variations of height and weight in the patients mouth respirators and the risks severe respiratory and circulatory disorders associated with sleep apnea, it is clear that respiratory problems in children should be treated from an early age to avoid major complications.^{15,16,17,18}

RECOMMENDATIONS:

Creating health policies who attend to the most depressed groups of society, provide services for the prevention and treatment of respiratory problems of enhancing the health status of children in phase of growth and learning, health authorities could create mouth respirators children screening centers, educating parents about the serious consequences that can carry and provide them with support from both medical and dental These centres subsidized by the Government agencies and with the support of private companies or foundations could give attention to problems myofunctional with the provision of trained professionals and with the supply of appliances appropriate for myofunctional respirators children oral treatments, in order to improve their health.

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