

## DIGITAL NATIVES: LUCKY OR JELLIED?

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### ABSTRACT

*The technology now seems to have involved not only the world of adults, but also and especially that of children, becoming a form of communication and rapid interaction and widespread dissemination. Some parents start to worry about a possible technological dependency, given the hours spent by the youngest, called digital children, in front of computer, smartphones and tablets. A decade ago, the sociologist Mark Prensky spoke of digital natives, that is the first generation of children grew up with consoles, videogames and computers while today we are witnessing an evolution of this concept in the third generation of digital, appeared approximately with the arrival of iPad and tablet and is constantly evolving in a technology with wi-fi, app (programs designed for smartphones) and touchscreen.*

**Keywords:** *digital natives, Millennial Generation, media devices.*

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### Introduction

The technology now seems to have involved not only the world of adults, but also and especially that of children, becoming a form of communication and rapid interaction and widespread dissemination. Some parents start to worry about a possible technological dependency, given the hours spent by the youngest, called digital children, in front of computer, smartphones and tablets. A decade ago, the sociologist Mark Prensky spoke of digital natives, that is the first generation of children grew up with consoles, videogames and computers while today we are witnessing an evolution of this concept in the third generation of digital, appeared approximately with

the arrival of iPad and tablet and is constantly evolving in a technology with wi-fi, app (programs designed for smartphones) and touchscreen<sup>(1-5)</sup>.

The conformation and the characteristics of these technological tools have allowed to attract more and more the attention of children bringing them intuitively exploration and practice in a very spontaneous and fun way, a leave as early as 18 months<sup>(1-5)</sup>.

Among the positive aspects there is certainly the possibility to start from the beginning very young to use technological devices that can allows develop cognitive skills that will brighten the minds of those who in the first years of life they interact continuously with the technology<sup>(1-5)</sup>.

Being multitasking helps children to integrate more information that is simultaneously managed by the brain making subjects more productive and quick in processing capacity information received. Today there are tablets dedicated to children and for this is designed to contain programs with educational purposes dedicated to different age groups<sup>(1-5)</sup>.

With the technological devices the little ones can learn foreign languages, do logic exercises and give free rein to fantasy and creativity. The negative aspects, encountered by doctors and scholars are many, and some they can be devastating for the child's psychomotor development, they can often provoke real and difficult pathologies then from to deal. In the present paper we try to summarize the negative aspects for which portable and fixed technological devices should be banned from children under 12 years old<sup>(6-25)</sup>:

- *Rapid brain growth*: between 0 and 2 years, the brain of children triples its size, and continues to develop rapidly up at the age of 21. The early development of the brain is determined by stimuli external, or lack thereof and it has been shown that a hyper-stimulation on a developing brain, generated by overexposure to technology (cell phones, internet, tablet, TV), can be associated with deficits in executive functions and attention, a cognitive delays, compromised learning, increase impulsivity and diminution of the ability to self-regulate, which can result in fits of anger<sup>(26-55)</sup>.

- *Developmental delays*: prolonged use during the day electronic equipment clearly reduces the hours of movement of the child, and this can affect the psychomotor development of the child himself, which manifests itself with delays which then influence also the school results<sup>(26-55)</sup>.

- *Psychological disorders*: excessive use of technology is one of the Causal factors of the increase in childhood depression, anxiety, disorders of attachment, attention deficit, bipolar disorder and psychosis<sup>(26-55)</sup>.

- *Aggressiveness*: violent contents of the media can generate aggression in the child. Younger children are more and more exposed to episodes of sexual and physical violence from current media on TV and on the Web. A particular case caused a stir in 2013 at the exit of the game "Grand Theft Auto V" for console, a game that has achieved the record number of receipts for the number of sales already at "Day One" but that soon blew up the anger of the parents, in as in the game there were explicit sex scenes, murders, violence, drugs, certainly not suit-

able for the playing public. The United States has defined violence in the media as a risk to the public health because of its impact on child aggression<sup>(26-55)</sup>.

- *Digital dementia*: the increasingly fast contents of the media can contribute to the development of the attention deficit, and to the decrease of concentration and memory, since the brain eliminates the Neuronal traces from the frontal cortex. Children who can not to pay attention, they do not learn<sup>(26-55)</sup>.

- *Addictions*: Parents increasingly glued to technology, yes away from their own sons. When there is a lack of parenthood, children can hold on to electronic devices and this can cause addiction, in fact one boy out of 11, between 8 and 18 years old, is technology dependent.

*Detachment from reality*: today the developers of apps and games are always more careful to improve the quality of the same, in terms digrafica, sound, lights in order to make the game experience unique. For this we come across games that make us enter a virtual reality, and we just need to combine various keys to change it to our enjoyment. Clearly this "virtual world" is very different from reality, and this can be harmful especially for young people can then have difficulty in distinguishing the "two worlds"<sup>(26-55)</sup>.

### ***Obesity and disorder of sleep: causes of an understanding of the technology***

Obesity has now become a problem of social relevance since in Italy this pathology is more and more frequent among children, up to 25% of pediatric population. Childhood obesity has a multifactorial genesis, as such, it is the result of different causes, more or less evident, that interact with each other. First place, is due to an excessive and bad diet, linked or not to reduced physical activity and genetic - family factors while they are rare cases of obesity related to hormonal alterations such as hypothyroidism or adrenal dysfunction. As for the power supply, a possible error can already be found in the first years of life, if it is true that an insufficient diet can lead to deficits of various types (proteins, calcium, iron, vitamins and other nutrients essential to growth), on the other hand an excessive caloric intake determines first an overweight of the child, then, in most cases, one shows obesity.

Overeating in the first two years of life, in addition to cause an increase in the volume of fat cells (hypertrophy), determines also an increase in their number (hyperplasia); as adults, therefore, you will have a greater predisposition to obesity and a diffi-

culty in losing weight or weight keep it within limits, because it will be possible to reduce the size of the cells, but it will not be possible to eliminate them. So said this, an attention on nutrition in the first years of life of the child, especially on the side of parents, it is fundamental, as it is also in adolescence, with a growing tendency to consume Junk Food or those foods that share a high contribution energy, salt, carbohydrates, cholesterol, lipids, fatty acids surely they are not healthy to the human organism. Among the Junk Food more widespread among the young there is definitely the hamburger, fries, and kebabs various snack, typical of fast - food. The question that many people ask is why do kids make such high consumption of these foods? The reason lies in the fact that such foods are “fast”, they are tasty and above all they are relatively cheap, compared to certain restaurants and taverns, but as explained above, they are also unhealthy, for this reason the doctors strongly recommend to make a moderate consumption, at most once per month<sup>(56-77)</sup>.

In addition to incorrect and unbalanced nutrition, it is not to be underestimated, as risk factor for obesity, reduced physical activity or a sedentary lifestyle, the result of a wrong lifestyle, but always more frequently reflected<sup>(56-77)</sup>.

The little ones, in fact, are often accompanied in the car by their parents (also if the school or the gym are just a few meters from the house), take the elevator even for one floor, spend hours and hours in front of the computer and the television (with negative examples that accentuate bad habits food), they leave less and less home and so on. Exercise is of fundamental importance for the child who grows, as, in addition to doing so lose weight, make it more active, helping to redistribute the proportions between lean mass (muscle tissue) and fat mass (adipose tissue). The factors family members are not less decisive than previous ones. Obesity, under certain aspects, it can be considered a hereditary problem and, in others, one consequence of environmental factors<sup>(56-77)</sup>.

As for sleep disorders, it is another pathology, not less important, more and more frequent in today's youth, and it too as we will see it can be caused or accentuated by an improper use of the technological devices. Before talking about sleep disorders, however, it is good first define what sleep is, that is a homeostatic process that allows to reset the organism. It is the circadian rhythm par excellence, that is winds through the 24h<sup>(56-77)</sup>.

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