Digital Technology and Children’s Learning

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Absent Parents, Technology Too Present

Added to this is the family situation: most children grow up with the constant absence of their parents due to work issues. At the same time, they face very high demands from their parents and teachers, both at school and in extracurricular activities.

Overly saturated schedules and the constant pressure from their environment to be the best and comply with various activities can cause behavioural disorders. “We see children who are exhausted at school, sleeping in class, angry and irritable,” and their emotional reactions are also altered at home.

“In other cases, children are playing at school during classes or when doing homework”, since the game is a natural part of their development and they need to carry it out at some point, says Brenda Rodríguez, a teacher in integral family therapy and a specialist in the psychotherapy of children and adolescents.

How The Early Use Of Technology Modifies Our Brain

Many parents feel that their children are very intelligent because they are able to use electronic devices, but teaching children to perform tasks that are too complex before their “system is ready to carry them out can produce permanent deficiencies in the ability to learn as long life”, according to members of the research group in Neuroplasticity and Learning of the University of Granada, coordinated by psychologist Milagros Gallo.

This phenomenon can be due to two reasons: on the one hand, the person is emotionally blocked, or the memory system is modified. “In both cases, the result is the same: you learn worse if you have taught us using complex techniques before the brain has formed properly,” explains Gallo.

The German philosopher Christoph Türcke has said that “the hyperstimulation of our audiovisual culture has given rise to a regime of attention characterized by ‘ concentrated distraction ‘”. In the long run, this situation affects children’s ability to persevere in tasks, remember, and build clear sentences.

Therefore, “the approach to technology must be directed and accompanied,” says psychologist Alma Rosa Hernández, a psychoanalytically oriented therapist and preschool teacher. Parents should organize the time their children will use the computer or other devices and monitor the content that will be viewed.

Above all, “electronic devices should not replace the attention and presence of parents,” emphasizes the expert, since it is a fact that the quality of attachment relationships with caregivers during the first years of life is crucial for the cognitive development of the child.

How Does Technology Affect Children’s Learning?

Students’ use of technology is a subject that has pros and cons. Even so, we can recognize, in general terms, that its proper use can have a positive impact on learning, especially if we consider that today children do not learn in the same way as they did a few years ago. In this scenario, it is worth asking: what place should be given to technology in children’s lives? How much does excessive use affect brain development? The child neuropsychiatrist Amanda Céspedes talks about this in an interview conducted by the Educar Group that we found interesting to share with you:

Amanda Céspedes:

“Digital technologies are changing the minds and minds of children.”

For this outstanding child neuropsychiatrist, all pre-technological time was better. She ensures that digital technology has penetrated our homes and social relationships, affecting the skills needed to relate and reducing the time available to share face-to-face. In this interview, we will learn specifically how it impacts the development of children and adolescents.

It is common to see children and adolescents spend hours in front of a tablet or smartphone, seduced and oblivious to the “real” world. Does this habit affect their intellectual and affective growth? Amanda Céspedes, a child neuropsychiatrist, says that it is a complex issue, even more so before the age of 10, a stage in which the various brain functions are being rapidly developed at the service of interpersonal communication. “Digital technologies are changing the minds and minds of children.”

When Do We Talk About “Excessive Use” Of Digital Devices In Children And Adolescents?

– I am very drastic: Before the age of five, children should not use digital devices as a means of entertainment and/or communication. Between 6 and 12 years, the use of devices (tablets, smartphones, etc.) should be less than two hours per day, adding entertainment and school work. In

adolescents, being connected to social networks should not exceed three hours per day and, if possible, parcelled.

What Impact Does The Age At Which Children Begin To Use Digital Technologies Have?

-The earlier children start using digital technologies, the fewer social skills are developed, such as the ability to read the mind of the other through the eyes, the reading of non-verbal cues, the pragmatic (quickly adapt the behaviour to context), empathy and spatial attention (quickly collect context data). It diminishes the use of sociolinguistic rules (giving thanks, asking for permission, smiling) and privileging fleeting social contact.

What Are The Reasons That Lead Children And Teenagers To Spend Long Periods In Front Of Multiple Screens?

-The screens offer extraordinarily attractive material from every point of view (thematic, graphic, sense of control); they generate a high expectation in front of the reward (games), or they are very gratifying for their content (movies, series). They raise the release of a molecule called dopamine, which causes enjoyment, expectation, interest, and curiosity. Many of them are available to the interested party anywhere and at any time, and their contents can be chosen. They serve as an antidote against boredom, loneliness, and grief. All this gives them a quality called “gratification”. They are very rewarding, and the human being loves what gratifies him. The dilemma is that if the child, adolescent or adult spends long hours in front of a screen, the gratification system becomes overactive and triggers addictive behaviour because the brain begins to need dopamine. The fundamental question is why a child or a teenager – or an adult – cannot turn off the screen to immerse themselves in real life. The answer is that real life is ungrateful. It is an escape.

What Is The Appropriate Age For A Child To Start Using ICT?

-Digital technologies (ICT) are a splendid resource when used in the classroom, with well-defined objectives. They develop creativity, divergent and convergent thinking, executive intelligence, originality, etc. It is different when ICTs become the source of entertainment at home, a resource that allows parents to ignore their children for a long time because they know they are “in good hands”. I am an ardent fan of ICT in the classroom as long as they know how to use it. It can be used in preschool as long as they do not become “the” only methodological resource. Kindergartners need

direct experiences.

What Care Should Teachers Have When Incorporating ICT As A Teaching Tool?

-The use of ICT as a methodological resource is very innovative and stimulating for children but should be avoided as a means to evade the teacher's main duty, which is to accompany students to create their learning, to make sense of it, and to apply it creatively. It is not enough to turn on the laptop or computers to believe they are learning in an innovative way. The teacher is key and must be a pedagogue who knows how to use ICT; they are a natural part of their methodologies because children perceive when the teacher, a digital immigrant, shows their weaknesses in front of students who are digital natives and dominate the technology in a very fluid way, leaving the teacher at a disadvantage, which loses leadership.

Utility And Risk In The Consumption Of New Technologies At An Early Age, From The Perspective Of Parents

Results

According to the criteria of the parents surveyed on the usefulness of the consumption of information and communication technologies at an early age, approximately 80% of the parents surveyed consider that these technologies facilitate the care of the minor (n = 13: 78.5%), generate free time (n = 143: 85.7%), allow for other tasks (n = 134: 80.3%), and constitute a safe activity (n = 134: 80.3%).

Also, parents of children under three years of age in the city of Santa Clara have a very inadequate perception of risk (n = 100: 59.9%) and an inadequate perception (n = 40: 24.0%) regarding the use of information and communication technologies at these ages. It is significant that only 2.4% (4 parents) have an adequate perception of risk since they identify the dangers and negative consequences of the use of these means in children under 3 years of age.

A greater number of parents consider that the use of television and other information and communication technologies almost never (from 35 to 50 parents) or never (from 70 to 82 parents) affects the development of children. Only figures close to 20 parents value the risks of the use of these technologies in the development of their children under 3 years old at their best; that is to say, "these technologies always lead to affectations in the psychic development of the minor."

78.5% (120) of parents consider that the use of new information and communication technologies by children at an early age does not generate any danger; only 6.0% (10) consider the opposite. This allows us to corroborate the danger to the correct and normal development of children at an early age when their parents do not recognize the risk implied by the excessive use of these means in the initial stages of life.

71.3% of parents with children under 3 years consider “normal” the average exposure time of their children to information and communication technologies, which ranges from less than 1 hour to more than 6 hours. It is significant to note that 75% of parents whose children consume more than 6 hours a day of TV value this as normal and that the remaining 25% consider it “very little”. The most appropriate criteria in this regard, which could indicate an adequate perception of risk, can be found in the 13 parents who recognize high consumption as “a lot” or “quite a lot”.

It is observed that the ways of obtaining information on the effects that information and communication technologies can produce on children under 3 years of age are insufficient. In this sense, more than 60% of parents recognize that they do not receive information from any of the mass media referred to in the survey.

They also do not receive information on these subjects through other people or through the use of leaflets and murals; this applies to more than 70% of the subjects surveyed.

The frequency with which parents receive information on the subject fluctuates to a greater extent, including rarely (n = 67: 40.1%), occasionally (n = 47: 28.1%), and never (n = 33: 19.7%). At these levels, the percentages of higher responses were also found, which contribute to a low perception of risk and inadequate or very inadequate criteria for the behaviour of this variable. It is also significant to find 15 parents who, despite receiving frequent information on this topic, do not value the danger of this consumption.

Parents with a low level of information on this topic underestimate the risks of these technologies and “accept their supposed advantages” in terms of utility. Note that 89.1% of those who never receive information on the subject consider information and communication technologies “very useful” or “useful”. Similar results are obtained for those who receive information occasionally (n = 35: 74.5%) or infrequently (n = 55: 82.1%). From these results, it is significant that of the 17 parents who receive frequent information on these subjects, 12 continue to consider the use of these media useful.

Discussion

In the study conducted, a very inadequate perception of risk was found in most of the parents of children under three years of age in the city of Santa Clara with respect to the influence of new information and communication technologies on the development of their children at early ages of life. In this regard, they estimate that the use of television and other audiovisual media almost never or never affects the development of children.

These data are representative of the fact that there is complete ignorance on the part of parents of the effects and negative consequences that new technologies can cause in their children in relation to processes such as thinking, language, the generation of affection, and socialization. In line with this, Schmitt and Anderson argue that television images fail to offer children of these ages the same amount and quality of detail they get from real life, which limits their learning.

In this regard, Quiroga states that television influences the social and cognitive development of the child, the acquisition of language, and the consolidation of self-regulation in vulnerable children, even when it is not known how much exposure to the media is necessary to produce large impacts, nor how many children are at risk. [22]

Llopis affirms that the influence of television on infant life passes through the parents, even though they are not aware of the mediating role they play. The relationship is not bilateral, television-children, but mediated: television-children-parents. In this regard, he considers that the control and use of television depend on the educational strategies used by parents on a daily basis to regulate children's television consumption. [23] In our opinion, if parents consider it "healthy" for their child to see audiovisual media from the first months of life, it is logical to think that they will expose their children to this consumption.

Leyda Cruz believes that when the relationships established by the adult with the child or the activities that the adult encourages do not allow the infant to develop its governing activity, socialize with its peers, or make use of language because of hyperstimulation, the appropriate development of the child is compromised at this stage and in subsequent ones. [24]

It was also found that the parents of the city of Santa Clara consider that information and communication technologies are useful for the care of the child. In this regard, they point out that the time the child is watching television can be used to attend to other tasks, and they consider that it "does not constitute a danger to the child".

These elements—the perception of risk and family valuation of the utility of consumption—could be the result of the scarcity of information that the population has about a problem that has become generalized in current Cuban society. In this last aspect, it was found that parents receive very little information about these topics.

The fact that some parents receive frequent information on the subject and still consider the use of these technologies positive in the development of their children or do not adequately assess their risks could indicate that the information received so far is not enough to change beliefs and attitudes around the subject. In this regard, new research would be necessary to deepen the understanding of this dissonance, which is an area not explored by the present investigation.

Conclusions

The parents of the city of Santa Clara consider that television and other audiovisual media facilitate the care of the child, generate free time, allow other tasks to be attended to, and constitute a safe activity. In this sense, it is observed that the boom in the use of information and communication technologies by children of an early age coexists with parents' low perception of the risk of the effects that these technologies can have on the child's development. This low perception of risk found in the parents of the city of Santa Clara, together with the "supposed advantages" that they perceive in the use of these technologies, is the result of the scarcity of information that the population has about a problem that has become generalized in current Cuban society.

The study aims to draw attention to the fact that urgent efforts and interventions are needed to contribute to increasing the perception of risk in the family environment about the risks involved in the consumption of new technologies by children under 3 years of age. The researchers start from the premise that this consumption begins at these ages under the mediation of the parents and that it corresponds to them to avoid the use of information and communication technologies during the first three years of life and to control the exposure time and the content of the programs during the following years.

The Positive Effect Of Technological Devices

Studies developed by Certain and Kahn (2001), Rideout, Vandewater, Wartella (2003), and Hamel (2006) establish that:

"17% of children between 0 and 11 months, 48% of 12 to 23 months, and 41% of 24 to 35 months see more than two hours of television every day. On a typical day, 68% of children under 2 years of age use the screens […]. 35% saw educational programs for children, 40% a mix between educational programs and best online casino entertainment for children and 20% programs for children and adults (Rideout and Hamel, 2006). The average age at which children begin to watch television is at 9 months. " (Rodríguez Sánchez, 2012, 26)

In this regard, the National Television Council of Chile carried out research in which it was determined that as the age of a child increases, he dedicates more time to television. In the study, it was concluded that children between 19 and 23 months of age (a little less than 2 years old) watch an average of 2.86 hours per day of television and spend almost an hour doing so alone. By leaving a child watching TV for so long, he may be negatively affected by this stimulus. This means that the activity carried out by the child is only receptive, which causes him to stay away from the reality that surrounds him; that is, he enters an imaginative world and loses his capacity for social interaction. If a child remains in this imaginary world for a long time, it can then become harder to keep him away from it.

How To Prevent Technological ‘Addiction’ In Children

When the Capio Nightingale Hospital opened its Technology Addiction Services in 2010, the youngest patients were as young as twelve years old. The children, however, come to the consultation at younger and younger ages, and this week has transcended the case of a four-year-old girl with an “extreme addiction” to the iPad who had to go through psychiatric treatment in order to overcome it.

“Children are born today in a technological environment, and many parents tend to use computers, iPads and smartphones as if they were nannies,” declares Dr Richard Graham, the psychiatrist at the London hospital who gave this week the voice of alarm for cases of addiction in early childhood. “If the child is left long hours magnetized to a screen, and if he sees his parents doing the same, we are creating the conditions for a sick relationship with technology.”

Graham invites parents and children to look at technology with the same eyes as food… “Just as there are healthy foods and junk food, there is a healthy relationship and a really toxic one with technology. To create from an early age, as it happens with obesity, so it is convenient to take into account the symptoms and start treating them as soon as possible before our children become ‘screenagers’ (adolescents on the screen)”.

Symptoms Of Addiction And Solutions

Does your child have trouble sleeping? Do they react with tantrums when it is time to press the ‘off’ button? Do they go through frequent states of anxiety and aggression when they do not have their daily ‘dose’ of technology?

“These are some of the clearest signs that a child can be hooked,” says Graham, who has adapted the ‘detoxification’ programs of adults to the little ones. “We are in any case before a changing world that forces us to adapt constantly, and each child is unique.”

The ‘detoxification’ happens in any case by a stimulus of activities off the screen, from social activities that require face-to-face contact to the practice of sports and outdoor activities… “Technology is here to stay, but there is that counteract it precisely with physical activity and with contact with nature, these are habits that children have to learn as soon as possible.”

“The biggest responsibility is for families, but schools also play a fundamental role in teaching children a healthy and balanced relationship with technology,” says Dr Graham. “And that relationship must begin to build from mutual trust… If children are strictly prohibited technology, they will feel the attraction of the forbidden and will tend to use it secretly, in the same way that a drug addict or alcohol.”

Graham is not in favour of declaring children's dormitories as a 'technology-free zone', but he does believe in the convenience of setting time limits, keeping the door open to control their use "and to ensure above all that children do not use screens an hour before sleeping so that it does not interfere in the dream".

Limits Also For Parents

The American Psychiatric Association recommends that children not be exposed to more than two hours of daily screen time (including television), although Graham is not in favour of declaring a minimum age of exposure to screens or imposing a rigid limit...

"Everything depends on each child; there are those who know how to make positive and creative use of the screen from a very early age, others are more passive and do not go beyond entertainment games, but let's say that above three or four hours, taking into account all the screens, we are usually in the limit of a "healthy diet".

Graham also criticizes the cultural and commercial pressure and the advent of 'nanny', which is a technology designed to engage children at increasingly younger ages. Even so, the psychiatrist expert in addictions urges parents not to fall into technological fatalism and, above all, to lead by example... "It is very easy to criticize children and despair with them regardless of what they do. We are doing all day long the smartphone and emails we have to show children, from very early ages, everything that life can offer beyond technology".

Using Technology For Children

The rhythm of life of today's families forces us to use technology as an indispensable tool to perform several day-to-day tasks. For example, if we have to cook, we no longer call our mother or mother-in-law to ask about the portions indicated for such a preparation, but we look for the recipe on the internet and are done—and, by the way, we avoid the long conversation about what will happen on the weekend.

In the case of families with children of school age, technology becomes indispensable when doing tasks. Nowadays, it is enough to "search" for the information or topic that we need on the web, and that's it.

As we can see, technology and the internet are really useful and necessary to lighten our daily tasks, but what happens when children are directly the users of this? As with everything, there are detractors and allies regarding the use of technological devices by the youngest members of the household, especially when it comes to the use of social networks.

In 2015, a secure Internet VTR study was published, which indicated that one out of every three

children has had access to a cell phone or tablet and that one out of every two five-year-old children already has their own tablet. In addition, 40% of children of the same age already have a cell phone.

Conclusion

Current studies on the dangers of television for young children need to be supplemented by broader experiments, especially over longer periods. However, we believe that the current results are sufficiently concordant to justify the establishment of prevention programs, especially since many parents think that television can promote the learning of their young children.

In August 2007, a petition launched at our initiative was relayed by the Associations of Professionals of Early Childhood and the Collective Inter-Associative Childhood and Media (CIEM). It encouraged the Higher Audiovisual Council (CSA) and the Ministry of Health to consider the exposure of young children to television as a public health problem. Since November 2008, television channels for children less than three years old must accompany their programs with the following warning: “This is a message from the Superior Council of the Audiovisual and the Ministry of Health: watching television can slow down the development of children under three years, even when it comes to channels that specifically address them. In the same way, all off-screen communication media (such as subscriber logs, the Internet, etc.) must include the following: “Watching television, including channels shown to be specifically designed for children under the age of three, may result in developmental disorders such as passivity, language delay, agitation, sleep disorders, impaired concentration and screen dependence.”

This is the first step, and it must be followed by others. This warning concerns only channels explicitly intended for babies, whereas it should concern them all. A vast information campaign for parents and educators should be launched, and the National Institute of Prevention and Health Education (INPES) could be the instigator.

However, we also believe that prevention should be carried out by setting up activities such as “The Three Figures Game” in nursery classes. Not only does it reduce identification with the roles of aggressors and victims, but it also encourages calling on an adult to resolve conflicts. It also fulfils three conditions: it corresponds to the priority objectives for maternal classes (such as appropriation of oral language, socialization, and body expression), it does not stigmatize any young person, and its implementation costs little and presents little difficulty since three days of training are enough.

This is why we propose that teachers who wish to engage in this can do so by setting up specific optional training for them because television consumption by young children continues to produce effects well beyond three years!

The Study That Will Dissuade You From Exposing Your Children To Screens

Children and adolescents live “immersed” in a world of screens of all kinds, which is not without consequences for their development.

The American Academy of Pediatrics (AAP) has been investigating the use of display devices among the youngest children and has not hidden its concern. In summary:

“Today’s children are growing immersed in a world of screens, which has both positive and negative effects on development.”

The Era Of Screens

Paediatricians first recall the following observations:

- Children under 8 spend less and less time watching television (from 2.24 hours in 2002 to 1.59 hours in 2012), competing with streaming platforms like YouTube and Netflix.
- 75% of teenagers have a smartphone, which allows them to access the internet, watch videos, and interact with apps. 91% of them connect from mobile devices (phone, tablet), so a quarter of teenagers are described as “constantly connected” to the internet.
- 76% of teens use at least one social network, and Facebook remains the most popular even though 70% of them have a “social network portfolio”, including Twitter and Instagram.
- Four out of five homes have a device used to play video games. Gamers are mostly boys; 91% said they have a gaming console, and 84% play games on their phones.

The AAP Takes Advantage Of These Findings To Emphasize That The Time Spent On Screens Continues To Grow From An Early Age.

Harmful Effects

- Obesity

This increases the risk of obesity and affects sleep. The American Academy recommends limiting the time of “sedentary activity in front of a screen” to 2 hours or less.

“The increase in calories consumed during snacks in front of the television has been pointed out as a

significant risk of obesity," says the AAP. "And having a TV in his room continues to be associated with the risk of obesity."

- Depression

The use of social networks also increases the risk of depression, especially for adolescents who use them passively (that is, they look at others' photos without interacting or publishing them themselves).

- Sleeping troubles

Beyond that, the Academy points to an increase in sleep disorders among those who sleep with their phones. Generated by light-emitting diodes (LEDs), the light of the screen activates 100 times more photosensitive retinal receptors than the white light of a lamp. As a result, even with low brightness, the laptop screen keeps a person awake, delaying the internal clock and impacting the quality of sleep.

"Exposure to light (especially blue light) and screen activity before sleep affects melatonin levels and can delay or disrupt sleep," she says.

- School failure

The Academy also points to the "negative effect on school results", especially since American paediatricians have noticed that "many children and adolescents use entertainment media at the same time that they perform other activities, such as homework".

- Early exposure to alcohol, tobacco and sex

Worse, the AAP links this growing exposure to the media to an earlier age of alcohol and tobacco use and sexual initiation. In support of this argument, an Anglo-Saxon study has shown that leading brands of alcohol have strengthened their presence on Facebook, Twitter, and YouTube in recent years and that 12% of 10-19-year-olds have already sent a sexual photo to someone else.

- Relationship issues

Finally, parents are also criticized in terms of their use. The Academy reports that a parent who turns his attention away from his child to watch his cell phone will have a poorer relationship with his offspring. As a result, these distractions would have negative consequences for emotional and social development.

Disconnection Times

To help parents, American paediatricians offer an online tool (only in English) to provide advice.

Here's what to remember:

- Avoid any use of screens for children under 18 months other than chat applications.
- Prefer high-quality programs when introducing screens to children 18 to 24 months old, always accompanying them to explain what they see.
- Impose time limits: a maximum of 1 hour of screen time per day for children from 2 to 5 years, accompanying them to understand what they are watching. Beyond that age, ensure that screens do not reduce sleep, physical activity, or other health-related behaviours.
- Create "screenless" moments and places, such as dinner time, car rides, or the bedroom.
- Repeat discussions on citizenship and online safety, both on respect for others and the protection of one's privacy.

This means ending the use of the tablet to calm the child and have peace. It also means ending all-night smartphone use by the teen, now subject to a "curfew".

The AAP also warns against the "passive screen", that is to say, the one that stays on even if nobody looks at it. "The child builds his spatial bearings in interactions with the environment that involve all the senses", explains Dr. François-Marie Caron, paediatrician and member of the French Association of Ambulatory Pediatrics (AFPA).

"We have never had so many requests for consultation for children, younger and younger, with attention difficulties, speech-language delays, learning difficulties..." says Carole Vanhoutte, speech therapist and co-founder of the think group Joue Pense Parle, on a daily basis.

No More Than One Hour Of Screen Per Day For 2 To 5 Years

Screen time for children aged 2 to 5 must be limited, according to the Canadian Pediatric Society (CPS), which suggests less than an hour a day. As for children under two, it is not recommended at all to leave them in front of TV and computer screens.

Exposure to digital media is increasing in family life, notes the Society. Parents' worries about the effects of screen time on their children are also increasing, it said at the outset when publishing a document on Thursday that is a statement of principles after a review of the literature on this issue.

"Screen time" means all the time spent in front of screens, whatever the means: smartphones, tablets, televisions, video games, computers, and all portable technology.

This proposed limit is not currently being met: in 2014, the Healthy Kids Canada charity found that children ages 3 to 5 spend an average of two hours a day in front of a screen—more than double the recommended amount.

By the way, only 15% of preschoolers spend less than an hour a day in front of a TV or tablet, according to another study cited.

And it is not only at home: many preschoolers have screen time at home and in child care, the Society says.

Dependence Apprehended

Why did CPS focus on this age group specifically?

First, because the child's first experiences with screens can be crucial, it says, citing many studies. Then, they can create addiction, and overexposure during infancy increases the likelihood of overuse later. Also, health-related habits, including the use of media, crystallize more easily during infancy than later.

The Society wanted to identify the benefits and potential risks of screen time for children under 5 years of age. Among the aspects evaluated, it looked at the impact on brain development.

In this regard, it concludes that it is not known whether early exposure to screen media changes the developing brain. On the other hand, strong exposure to television in the background is detrimental to the use and acquisition of language and the level of attention, the report says.

Social Skills

But it is not all bad: from the age of about two, well-designed, age-appropriate television programs with specific educational goals can be an additional way to improve social and language skills in children 2 years and older, especially those living in poverty or otherwise disadvantaged.

They can also encourage positive attitudes towards ethnic groups.

The Society advises limiting screen time, but it also suggests that parents look at the content with their children to make connections between content and reality and to reinforce skills such as attention, memory, and reflection. It is also recommended that parents alternate between activities involving screens and active play.

Conclusions

As we have seen, most studies agree in supporting and providing empirical support for the recommendations made by the AAP, according to which children under two should not have any exposure to screens and those over this age should have it limited to two hours daily.

Most studies warn of the negative effects that overexposure to screens (television, mobile phones, tablets, etc.) can have on health at different levels. At best, and provided that the maximum exposure time is respected, viewing educational programs appropriate to the child's age or using educational applications seems to have no negative effect or may even show some beneficial effect. However, this is not superior to what can be experienced through other educational materials or through direct experimentation with the environment.

Excessive exposure to screens occupies time that otherwise could have been used for problem-solving, reading, sports, hobby development, interaction with family and friends, outdoor activities, or contact with nature. For Hammermeister and Cols (2005), the little time spent in social interaction with peers can be the cause of the association that exists between excess television viewing and more timid, lonely, and depressive personalities compared with people who do not watch television or who do so in a more moderate way (following the recommendations of the AAP). If we speak in economic terms, we would say that exposure to screens has a high *opportunity cost:* non-involvement in other alternatives that may have clear benefits at the psychosocial level.

Technology is not bad. Neither television, mobile phones, tablets, nor cars are inherently bad. We only have to take into account to whom they are directed and regulate their use consciously. Cars are not bad, but we do not allow children to drive, and it will always be more advisable to walk to buy bread than to do it by car. This does not mean that cars are bad, but bad use of them can have very negative health implications.

Children know the world through their parents. Screens disconnect them; for a while, the child does not exist to the parent. It is comfortable, but it has a cost that translates into fewer opportunities for interaction and learning. For the same reason, we must also limit our use of these personal devices in front of them because, in the same way, we are reducing the quantity and quality of interaction with them, which will have consequences for their development.

How Does Technology Affect Children And Young People?

The use of technological means has advantages and disadvantages because it can serve as a distraction. Many have disregarded verbal communication because of technology and understand that we are in a globalized world, but even in the family environment there is no longer the same interaction between parents and children or the same fluid communication. The use of technology by a child who spends the day locked in his room with technological devices and consulting social networks can cause problems in the development of his communication skills. Therefore, advice is needed on how to make good use of technological means.

The use of new technologies has modified the abilities and behaviour of children. Although they may develop more technological skills, excessive use can limit motor development and is associated in this

discussion with attention deficits, depression, and diseases that were previously considered more common in adults, particularly when video games are overused.

These types of technological devices can leave young people less prepared for face-to-face life, both mentally and physically, and this is not enough to lead a healthy life. Physically, they may lack the motivation to exercise and engage in activities. Mentally, they may become overly dependent on video games, television, cell phones, and other devices that greatly distract them in the classroom or at home for hours or even days.

Nowadays, technology has become a companion for both children and young people at an early age. Many specialists focus on the theory that children learn by building their own knowledge and continuously discovering new things. Based on this premise, it seems correct to facilitate the use of technologies because they can challenge the child to develop his own learning process.

On the other hand, Rosen (2005) emphasizes that although technology helps children and adolescents to develop their personalities, continuous exposure without control could generate a problem in terms of developing their communication skills if it is not used properly.

According to the author, we believe that the misuse of technologies can affect both children and adolescents negatively and positively, especially through the use of video games that absorb a large amount of time and are not controlled by parents. This can cause a lack of communication, lower academic performance, and behavioural changes, among other problems.

Therefore, the father, mother, or guardian must create trust with their children; that is to say, there should be communication between them so that children do not live isolated from reality. Parents should not allow their children free rein in the misuse of technology. However, this does not mean that children should not use technology; it must be remembered that if they use it for educational purposes, they can use it appropriately.

The father and mother must monitor how their children use technology, and they should also talk with them about the media and consume certain content together.

One suggestion is to avoid having television and computers in children’s rooms, as that isolates them and encourages the absence of interpersonal relationships.

The use of the Internet and video games from childhood has meant that new generations are getting better and better with technology, that they almost use it instinctively, and that they handle a wide range of technological knowledge at an early age. This phenomenon can be both positive and negative: positive in the sense that technology has become a contribution to educational matters, and negative because of the change it generates in the way children and adolescents establish relationships with their peers, in addition to the high risks involved in exposing so much information on the network.

According to child and youth psychologist Francisca Rodríguez, technology can have both good and bad influences on children and young people in psychological matters. According to the professional, “It is very positive that young people know how to use technology, the internet and social networks because they are channels that serve them to communicate, but parents have the responsibility of teaching their children the proper use of technological tools so that they know how to use them in their favour and not against them. “But in some cases, technology can have a very negative effect on children and young people because it can provoke isolation from the real world because they spend many hours surfing the internet, chatting or playing video games, and lose a significant amount of time they could use doing other activities with their peers. Young people submit to the internet.

According to research by Hellawell (2001), the use of ICT can help develop new skills and improve employability and self-confidence. Learning to use the Internet can be an opportunity for young people to develop relationships and friendships.

It is impressive that the way children and adolescents enjoy their childhood has changed, since this is one of the most important stages of life in which personality develops. Perhaps that is why childhood life now seems rushed and deprived of some of the richness experienced by previous generations, who did things in a more innocent and leisurely way and cared mainly about enjoying games and family. Now many relationships are conducted only in a cybernetic way, and even when people are physically close, the distance can feel wide because many capacities for personal interaction are lost. Forms of study and learning are also increasingly provided through the Internet rather than through direct resources or didactic material. Because technology facilitates more processes every day, many people become dependent on it, and it is difficult not to be part of it in a globalized world. However, everything depends on the way technology is used and the role we assign to it in our environment.

Currently, many children and young people have a major problem with technology: a strong dependence on it and a leisure habit that is difficult to avoid, in which their world and way of seeing things can seem to revolve around technological devices.

These technological devices can leave young people less prepared for face-to-face life, both mentally and physically. Physically, they may lack the motivation to exercise and engage in activities. Mentally, they may struggle to think independently when they spend excessive time on video games, television, and other devices that distract them for hours or even days.

To examine the incidence of technology in interpersonal relationships, we spoke with child-youth psychologist Francisca Rodríguez, who believes that technology can have good and bad influences on children and young people in psychological matters. According to the professional, “It is very positive that young people know how to use technology, the internet and social networks, because they are channels that serve them to communicate, but parents have the responsibility to teach their children the proper use of technological tools so that they know how to use them in their favour and not against”.

Rosen points out that although social networks help pre-adolescents develop their personalities,

continuous exposure without control could generate a problem in terms of developing communication skills in younger children.

“Human beings are social creatures, and the truth is that a screen does not replace the love and care that a caregiver can give a child. Technology should not replace the company of parents”, warned the expert from the Universidad Iberoamericana.

The use of technology today has been very helpful in the educational area, especially for young people and children, since they have a great capacity for learning. We must take into account that technology has both positive and negative effects, particularly when parents do not worry about knowing what their children do or what they like when they use technology. Young people and children can develop a strong dependence on technology, and it can seem that they idolize technological devices. I think that excessive use of these technologies can cause children to engage in fewer physical activities because they are tied to these devices. Technology may be good for development, but in excess it can become a serious problem.

According to a study conducted by Kaiser in 2009, children aged 8-18 are engaged with digital media for an average of 7.5 hours per day. This is a problem since no more than 1-2 hours a day are recommended in this discussion. Limits are therefore needed to avoid the abuse of these technologies.

Currently, in most countries, the so-called technological revolution is taking place, and this, like any change, brings favourable and, of course, unfavourable repercussions.

In the case of children’s prolonged exposure to the Internet, it could lead to deficits in different areas and behavioural alterations. Today, children have different options for knowing the world through the Internet, and ideally this should be done in a supervised and controlled way. Although it is a tool of great benefit for their education, stimulation, and learning, there are also certain latent threats, so their exposure to these technological sources must be controlled by their parents or another adult.

According to a study carried out by the School of Medicine of Yale University in 2008, greater amounts of time spent on technological media and the Internet are associated in the study with a greater risk of smoking, alcohol and drug abuse, poor school performance, early initiation of sexual activity among children and adolescents, and the frequent problem of childhood obesity.

A serious central question is: Does technology affect our behaviour toward our environment? The answer would clearly be yes. If it occurs in adults, it may occur even more among young adolescents who are more experimental in their use of technology. According to Handkr (2008), technology can be considered “a useful tool to educate or to use to inform, to break down barriers and also when used with moderation.” However, there are many risk factors for young people, including health damage, behavioural problems in educational institutions and at home, and risks to personal safety.

Speaking of health risks is important because many young people spend up to 21 hours or more per

week using different types of technology (esun.edu). If they spend so much time on these technologies, young people may tend to eat more food, which can contribute to childhood obesity. Negative effects on school are evidenced by the little time devoted to educational work and the association between time spent using technologies and low school performance among young people. Behaviour is also a factor: some young people show a radical change in behaviour, becoming aggressive and isolated from reality. When they are unable to surf the internet, they may show aggressive behaviour. Technology may also affect young people's safety because they discover many forbidden things that they find interesting, one of which is pornography. Some send sexually explicit images and videos of themselves using their cell phones, and young people can be accused of child pornography. A further risk is that they could be targeted by sexual harassers in chat rooms or social networking sites.

In conclusion, the young people and infants of this generation have grown up in a world of computers, portable devices, and digital music. We cannot leave technology aside because it is part of their existence, as it is for most people of all ages. Many people cannot spend a quiet day without a cell phone because they become anxious without it. What is needed is greater supervision by parents in the use of technologies, limiting the use of programs downloaded from the Internet and restricting pages forbidden to minors.