Egypt. J. of Appl. Sci., 40 (1-2) 2025 *9-15*

SCREEN TIME EXPOSURE ON NORMAL PRESCHOOL CHILDREN: (REVIEW ARTICLE)

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ABSTRACT

Screen time (ST) is a broad term commonly used to refer to a collection of sedentary behaviors, including television viewing, playing video games, and using of other electronic devices, such as computers, smartphones and tablets. Screen media devices have become an integral to daily life, especially for preschool children. Early age of initiation of electronic screen exposure causes high ST in the following years. Media usage has both positive and negative effects on young children and has many health, developmental, and behavioral challenges in children. Excessive ST negatively impacts children's health and development, leading to delayed language skills, poor social interactions, and behavioral challenges. It reduces focus, attention span, and physical activity while disrupting sleep quality and increasing the risk of obesity. Additionally, it affects cognitive, socio-emotional, and communication skills, highlighting the need for balanced screen use to support healthy development.

Key Words: Screen time exposure, Normal preschool children

INTRODUCTION

1) Normal preschool children.

Preschool age is starting from the age 3 to age at start of school **(Haibach-Beach *et al.,* 2018).**This period of early childhood represents a crucial period in his development **(Hassan, 2013).**

Preschool children may form habits easily, and early excessive screen exposure increases the likelihood of excessive screen use in later life; health routines are established more easily in younger children than older ones; screen use tends to increase over time, to experience more entertainment versus exclusively educational viewing. Research highlights significant developmental differences between preschool children and older age groups, emphasizing that early screen exposure can have a lasting impact. TV-based studies suggest that a child's first interactions with screens can be formative, potentially leading to habit

formation. Overexposure at a young age increases the likelihood of excessive screen use later in life. Moreover, health-related routines, including family media habits, are more easily established in early childhood than in later stages. To support healthy development in preschool children, evidence-based guidelines have been developed to manage screen media usage effectively **(**Society ***et al.,*** **2017)**. Excess screen time (ST) in preschool children has a prevalence of 10 to 93% in high-income countries and 21 to 98% in middle-income countries, and it is associated with various health risks **(Kaur *et al.,* 2019).**

2) Screen time (ST) exposure.

The different types of screen media existing in the present day are vary widely including television (TV) ,smart phones, tablets, videogames ,social media and virtual reality as shown in **Fig.(1): (Panjeti-Madan, and Ranganathan, 2023).**

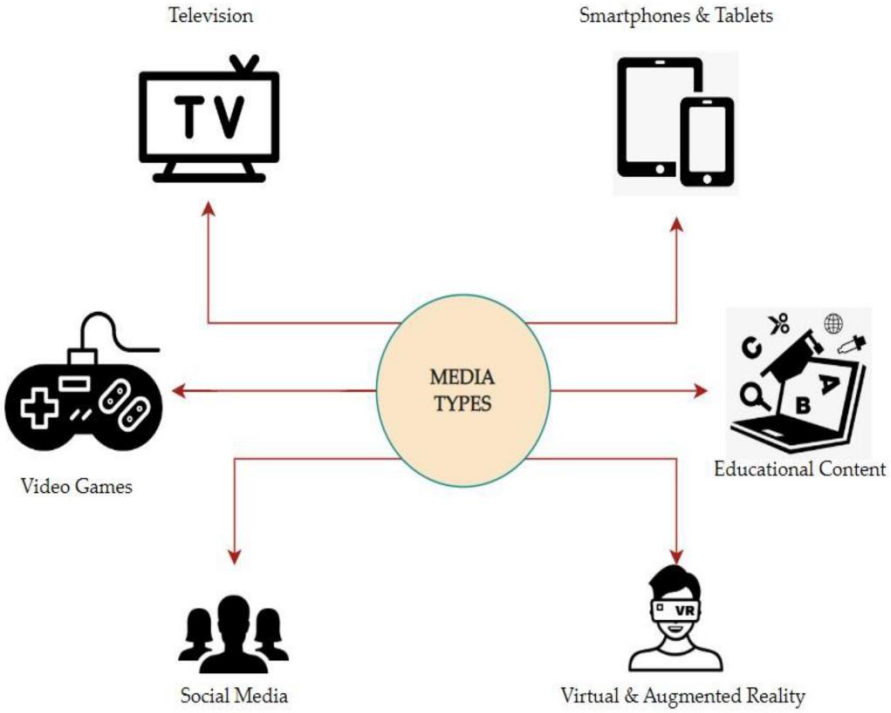

Fig. (1): Different types of screen media.

Screen media devices have become a vital part of daily life, especially for preschool children due to emerging technologies, increased

marketing , widespread familial and societal use , and easy access for young children **(Yalçin *et al.*, 2021).**

Screen Media before the 2000s was confined just to TV for the most part. With the advent of modern technology, including smartphones, tablets, digital toys, and gaming tools, children are often occupied with digital content that comes in many sizes and forms **(Panjeti-Madan, and** Ranganathan **2023)**.

Mobile devices are quickly becoming the preferred media choice for children because of their screen size, mobility, ability to stream content, interactive capability, and decreasing costs **(Kabali *et al.*, 2015).**

Screen time has a wide range effects on physical, social and emotional outcomes in childhood **(Reid Chassiakos *et al*., 2016).**

Excessive use of screen media devices may become problematic in children, may causing addiction to screen media devices ,losing interest in other activities, not being able to control use of a digital device and feeling the need to spend more time using a digital device **(Hawi *et al.*, 2019).** Developing addictive behavior, impairing vocabulary acquisition, and deterioration of language and cognitive skills are potential negative effects of early screen exposure, due to the developing brain being at its most vulnerable stage **(Wolf *et al.*, 2018).**

The American Academy of Pediatrics reviewed the health and developmental concerns related to media use and found that (obesity, shorter sleep duration, behavioral problems, cognitive, language, and social emotional delays) for children **(American Academy of Pediatrics, 2016).**

The literature reported that those children will become obese, experience behavioral problems, sleep irregularities, poor academic performance **(Muppalla *et al.*, 2023**).

The negative effects of screen time exposure on normal preschool children:

A) Irregular sleep.

Research shows that ST can disrupt children's sleep patterns **(Cespedes *et al.*, 2014).** Excessive screen usage can cause sleep problems in children and other adverse effects on children's health and development **(Nathanson, 2021).** Too much ST and regular exposure to poor-quality programming have been linked to inadequate sleep schedules and insufficient sleep in children. Sleep loss can lead to fatigue and increased snacking **(Panjeti-Madan, and Ranganathan, 2023)**. ST is believed to contribute to insufficient and poor-quality sleep through

multiple mechanisms. Firstly, it leads to time displacement, where increased screen use reduces the time available for sleep. Secondly, the psychological and physiological stimulation from media content and social interactions can make it harder to fall and stay asleep. Lastly, exposure to bright screen light affects the sleep-wake cycle by suppressing melatonin production, a hormone essential for sleep regulation **(Hale, and Guan 2015)**.

B) Poor diet and obesity.

Screen time may influence preschool children's food intake. Children with longer ST had vegetables and fruits less frequently, while having a higher intake of snacks and sugary drinks. So, screen time has a negative impact on vegetable and fruit intake **(Miguel-Berges *et al.*, 2019).** They are also more prone to eat while distracted, leading to mindless eating and weight gain. The more time children spend watching TV or playing video games, the higher their chances of becoming overweight. Additionally, having electronic devices in a child's bedroom further increases this risk. Children may also develop a preference for junk food advertised in commercials and tend to overeat while using these devices **(Christensen, 2021).**

C) Impaired cognitive and academic development.

Studies have shown that excessive ST can negatively affect a number of cognitive areas such as executive functioning, sensorimotor development, and academic outcomes. ST was found to have a negative impact on executive functioning in teenagers, notably on working memory, inhibition, and the capacity to switch between tasks **(Liu *et al.*, 2022)**. Early screen exposure has been associated with lower cognitive abilities and academic performance in later years **(Muppalla *et al.*, 2023**). Children who have TVs or other screens in their bedrooms tend to perform worse on tests than do those who don't have these in their bedrooms **(Christensen, 2021).**

D) Impaired language development.

There is growing concern that increased ST reduces both the quantity and quality of parent-child interactions, limiting opportunities for children to practice and enhance their language skills **(Mustonen *et al.*, 2022).** Higher screen exposure in early childhood has been linked to negative effects on language development **(Karani *et al.*, 2022).**

E) Behavioral problems and Impaired social emotional development.

Excessive screen usage can also lead to problems in social-emotional development. It can impair emotional comprehension, promote

aggressive behavior, and hinder social and emotional competence **(Muppalla *et al.*, 2023**). Children spend more than two hours a day watching TV, playing video games or using a computer , smartphone are more likely to have emotional, social and attention problems. Also, exposure to video games is linked with an increased possibility of attention problems in children **(Christensen, 2021).**

F) Less time for play.

Excessive ST leaves less time for active, creative play **(Christensen, 2021).** ST may negatively impact physical activity by reducing the time available for play. It is commonly believed that increased TV viewing replaces hours that could be spent being physically active, leading to lower energy expenditure and potential weight gain **(Dietz, 2001).**

CONCLUSION

Screen time (ST) may have serious adverse effects on children's health over the long term, including (delayed language skills, poor social interactions, reduced physical activities, lack of sleep, emotional distress, and behavioral problems) making this a pressing public health concern. So, it is crucial for parents to be aware of the potential impact of ST on children's health to take necessary measures to promote healthy habits like encourage physical activity, social interaction, and other healthy lifestyle habits to reduce ST and promote overall health and well-being in children.

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وقت التعرض للشاشة علي الأطفال الطبيعيين ما قبل المدرسة

(بحث مرجعي)

منه الله جلال حسانين ، اميرة فرج الشيخ ، خالد أحمد ممدوح ،هدي عبد العظيم الطلاوي

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يشير مصطلح وقت الشاشة الي مجموعه واسعة من السلوكيات غير النشطة والتي تتضمن مشاهده التلفاز ولعب ألعاب الفيديو واستخدام الاجهزة الالكترونية مثل اجهزه الكمبيوتر والهواتف الذكية والاجهزة اللوحية .أصبحت وسائل الإعلام الرقمية جزءًا لا يتجزأ من الحياة اليومية، لا سيما لدى الأطفال في سن ما قبل المدرسة. يؤدي التعرض المبكر للشاشات الإلكترونية إلى زيادة وقت الشاشة في السنوات اللاحقة. ويؤثر استخدام الوسائط على الأطفال الصغار بشكل إيجابي وسلبي، إذ يرتبط بالعديد من التحديات الصحية، والتنموية، والسلوكية. يمكن أن يؤثر الاستخدام المفرط لوقت الشاشة سلبًا على صحة الأطفال ونموهم، مما يؤدي إلى تأخر مهارات اللغة وضعف التفاعلات الاجتماعية والتحديات السلوكية. إنه يقلل من التركيز ومدى الانتباه والنشاط البدني مع تعطيل جودة النوم وزيادة خطر السمنة. بالإضافة إلى ذلك، فإنه يؤثر على المهارات المعرفية والاجتماعية والعاطفية والتواصلية، مما يسلط الضوء على الحاجة إلى استخدام الشاشة بشكل متوازن لدعم النمو الصحي.