

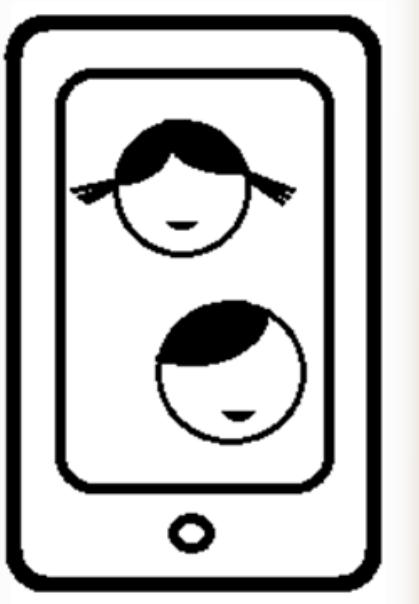
# ELECTRONIC MEDIA AND YOUNG CHILDREN'S HEALTH: ARE THERE MORE RISKS BEHIND THE SCREENS?



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## Background

Screen-based (electronic) media, especially interactive screen media such as smartphones and tablets has been increasingly used by young children during recent years (Lauricella et al., 2015; Paudel et al., 2017). In addition, TV remains popular screen among young children, also possessing risk for childhood obesity (Zhang et al., 2016). Total screen time is evidenced to be a risk factor for children's mental and physical health.

We propose that excessive use of screens in early childhood is also related to other unfavorable health related and parenting behaviors.

In this study we analyzed 1) the amounts of young children's screen time; 2) whether the use of screens relates to their health.; 3) what are the other risk factors associated with screen time and health problems?

## Methods

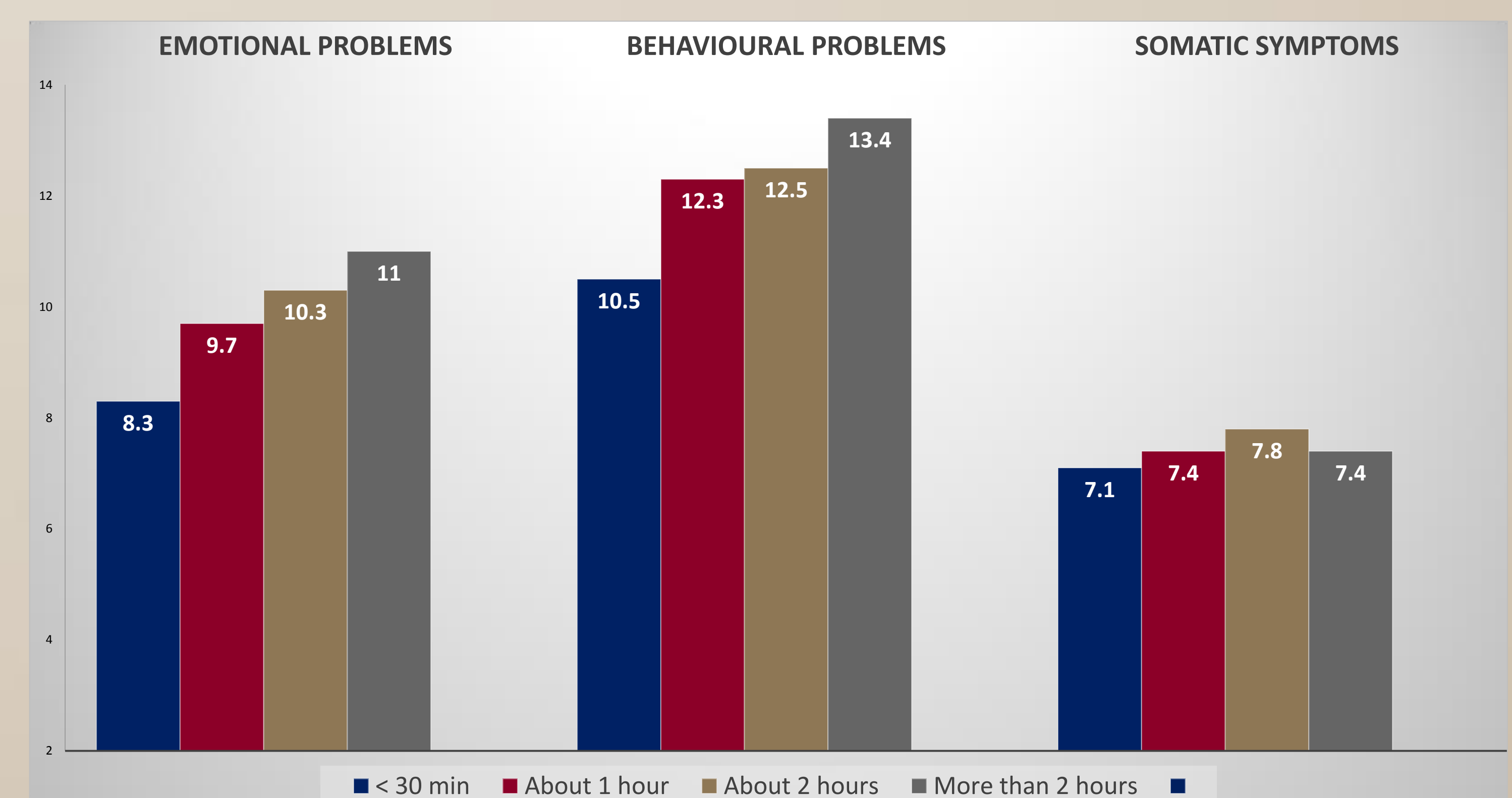
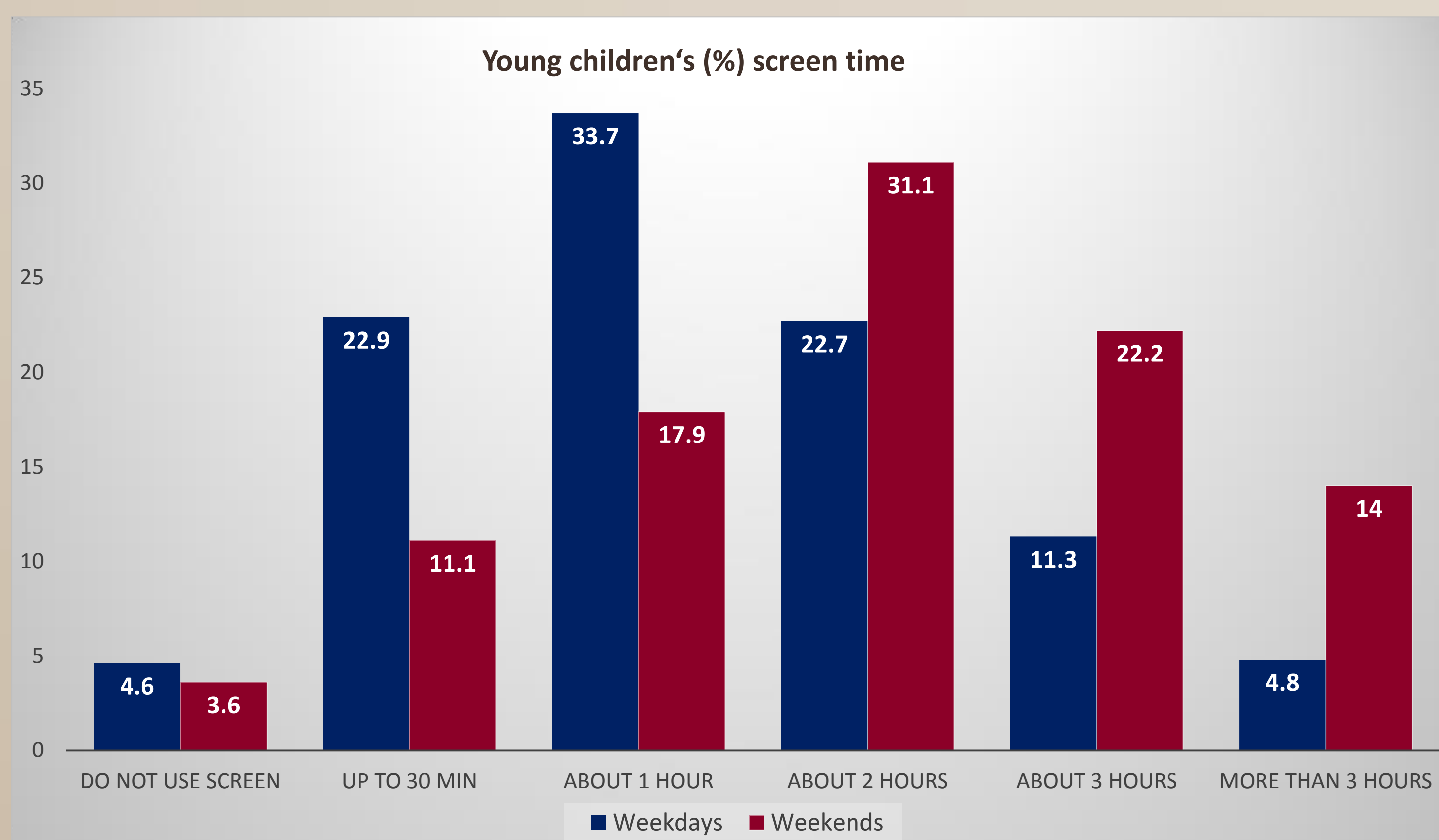
Participants were 1160 Lithuanian toddlers and pre-schoolers (18 to 71 mo. old; mean age 42.5 months; 51% male) and their parents. This is population-based longitudinal study, data gathered from May to December 2017.

Parents reported demographic data (*maternal and paternal education*), overall child's health (*somatic symptoms*), use of electronic media (*screen time*) on weekdays and weekends, parenting behaviour (*screen-regulating rules; parental distress; using screens to sooth and/or entertain a child*).

Parents also reported child's *emotional and behavioral problems, and sleep problems* on the Child Behaviour Checklist (CBCL/1½-5, Achenbach & Rescorla, 2000; 2011).

## Results

Screen time duration increased with child's age. Longer screen time was positively associated with children's emotional and behavioural problems, and somatic symptoms. Overall, 45% of children had at least one electronic screen-based device in their bedrooms. Those children spent on the average longer hours on the screens as well as had more emotional and behavioural and sleep problems.



Differences significant at  $p < .01$ ; Emotional and behavioral  $p < .01$ ; Somatic  $p < .01$

Partial correlations controlling for child's age

	Screen time weekdays	Screen time weekends	Emotional problems	Behavioural problems	Somatic Symptoms
Eating with screens	.304***	.206***	.114**	.073*	.069
Eating junk food	.241***	.304***	.127**	.204***	.097*
Parental distress	.139***	.155***	.259***	.306***	.178***
Maternal education	-.157***	-.166***	-.142***	-.060	-.067
Paternal education	-.174***	-.218***	-.147***	-.100**	-.061
Screen regulating rules	-.305***	-.298***	-.139***	-.143***	.056
Screens to entertain and soothe a child	.327***	.387***	.175***	.215***	.099**

	1	2	3	4	5	6
Eating with screens	.118**	.017	-.063	-.030	-.234***	.247***
Eating junk food / 1		.226***	-.020	-.071*	-.225***	.281***
Parental distress / 2			.055	.012	-.156***	.203***
Maternal education / 3				.455***	.095**	-.091*
Paternal education / 4					.118**	-.098*
Screen regulating rules / 5						-.247***
Screens to entertain and soothe a child / 6						

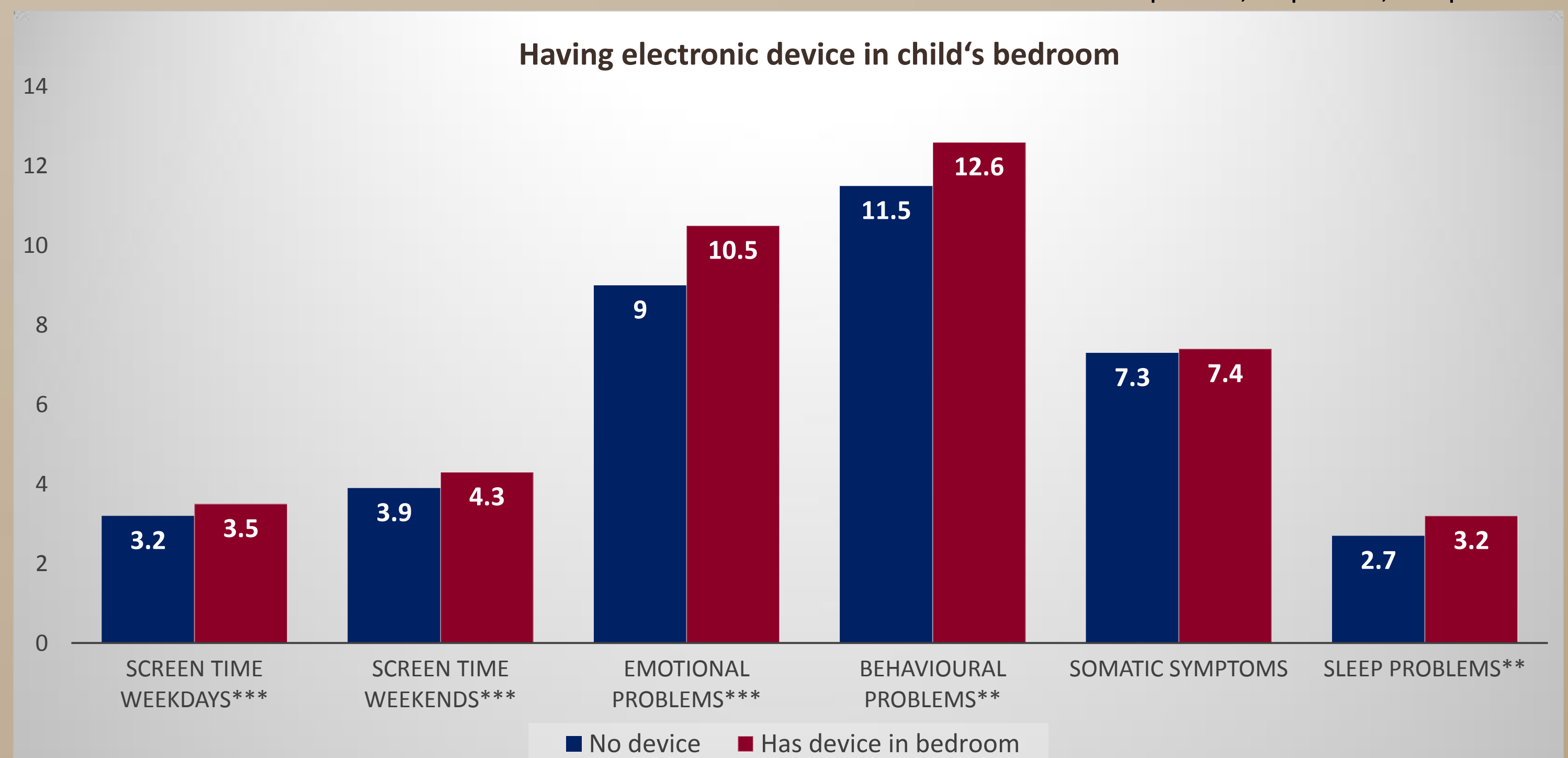
Note: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .000$

## Conclusions

- More than half of children aged 1.5 to 5 years old spent in front on screens 2 hours per day and more on weekends, and more than one third of children spent 2 hours and more on weekdays. Screen time during weekends is significantly longer.
- Longer screen time (1 hour and more) was related to higher mental and physical health problems.
- Both longer screen time and emotional and behavioral problems were also related to child's eating with screens, eating junk food, and having screen in child's bedroom.
- Parental education, parental distress and parental failure to keep on screen regulating rules as well using screens to calm down or entertain a child are additional risk factors for longer screen time and higher health problems.
- Health providers should pay considerable attention to young children's screen time and parental behaviour regulating electronic media use in order to discover the other risks for child's health and development behind the screens.

## References

1. Lauricella, A., R., Wartella, E., & Rideout, V. (2015). Young children's screen time: The complex role of parent and child factors. *Journal of Applied Developmental Psychology*, 36, 11-17.
2. Paudel, S., Jancey, J., Subedi, N., Leavy, J. (2017). Correlates of mobile screen media use among children aged 0-8: a systemic review. *BMJ Open*, 7:e014585.
3. Zhang, G, Wu, L, Zhou, L, Lu, W, Mao, C. (2016). Television watching and risk of childhood obesity: A meta-analysis. *Eur. J. Public Health*, 26:13-8.



## Recommendations

- One hour or less for electronic media use in toddlerhood and preschool age
- Avoid screens and electronic devices in bedroom and during meals
- Keep on screen time regulating rules
- Avoid screens for soothing and entertainment purposes