**Abstract**

In April 2019, the World Health Organization published guidelines on physical activity, sedentary behavior and sleep for preschool children. These guidelines attracted the public attention because they warn parents from exposing infants and 1-year-old children to screen-based entertainment. The current article presents a step-by-step critical review of the scientific literature underlying these guidelines. In each step, one "block" of assumptions is removed such that the entire "tower" of guidelines seems extremely unstable. In Block 1, a distinction is made between the framework of the guidelines (i.e., inactivity and obesity) and screen time. This procedure isolated 33 relevant studies on cognitive and psychosocial effects of screen time. In Block 2, major reservations are raised regarding the very low quality of 31 studies. The two moderate-quality studies are significantly challenged in Blocks 3 and 4 and are proved to be irrelevant. In Block 5, the overall impression from all 33 studies, which include a wide range of goals, mix findings, and null results, challenges the assumption that the studies can be aggregated to being with. Even if the aggregation assumption is accepted, the meta-analysis of all 33 studies in Block 6 shows that the overall effect of screen time is negligible (Cohen's d = 0.016). Finally, Block 7 presents evidence that the entire field suffers from a publication bias toward a moral panic of screens. The conclusions from this review on preschool children are discussed in view of contemporary research on adolescents and adults and five alternative, evidence-based, recommendations are offered.

**Public significance.** Popular media often give voice to warnings against harmful outcomes of screens. These warnings were allegedly supported by formal WHO guidelines that ban/limit screen time for babies and toddlers. The current review and meta-analysis undermine the scientific basis of these guidelines. Instead of stimulating the moral panic of screens, a more balanced and scientifically grounded perspective is offered and alternative practical recommendations for parents are provided.

**Keywords.** Critical review, meta-analysis, screen use, moral panic, recommendations for parents