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Requesting National Guidelines for Screen Time in Indian Children from IAP

We read with great interest the research article by Meena, et al. [1] on screen time in children by 15-18 months of age. We wish to share our survey findings of 109 well children (12-36 months) at three hospitals in Bangalore between September, 2016 to April, 2017. We found that the mean (SD) screen time exposure was 120 (96.2) minutes (range 0-540 min) in this age group, similar to the study by Meena, et al. [1]. Television (69%), mobile phones (66%), tablet (27.5%) and laptop (22%) were the most common electronic media used in our study. We found rhymes (89%) commercial advertisements (62%), educational videos (36%), and cartoons (20%) constituted majority of the activities during screen time. Importantly, 73% of the parents used screen time to help the child in eating, 51% for entertain-ment, and 34.8% as a distraction to give the caregiver some free time. Contrary to their findings, we found that only 7% of the parents thought screen time was good for the child. We found that 26% of these children had delay in speech for their respective ages. An association with speech delay and screen time has also been reported earlier [2,3].

We agree with the authors that it is the need of the hour to not only provide Indian guidelines for screen time in toddlers to parents but also to make them aware of possible adverse effects it may cause in their toddler's speech development. We are eagerly waiting for guidelines of Indian Academy of Pediatrics on screen time for children to address this important issue, and to communicate these to parents in addition to practitioners.

Ethics clearance: Institutional Ethics Committee, Kids Clinic India Pvt Ltd; No. ECR/791/ Inst/ KA/ 2015/RR-18, dated August 20, 2016.

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The Need for Geographic Location Specific Optical Density Cut-offs for IgM ELISA Serology to Diagnose Scrub Typhus in Children

We read with interest the article on detection of immunoglobulin M and immunoglobulin G antibodies against *Orientia tsutsugamushi* for scrub typhus (ST) diagnosis by Gupte, et al. [1]. This study was done to estimate the regional cut-off of optical density (OD) values of serum IgM antibodies by ELISA for the diagnosis of ST. Authors had successfully determined regional cut off of OD value for IgM antibodies, which will be utilized in diagnosing ST in that area. This study has shed light into one of the most obvious pitfalls in diagnosing ST by serology (IgM ELISA) i.e., using an inaccurate, arbitrary OD value cut off for diagnosis. This has serious implications that are applicable beyond the study population.

We would like to raise two pertinent points based on the study conclusions. Most studies conducted in pediatric ST using serology by IgM ELISA used 0.5 OD as an arbitrary cut off in accordance with the definition of 'probable case' by the IAP guidelines on rickettsial diseases in children [2]. Since OD of 0.5 is much lower than most of the cut offs reported from Southeast Asia, where ST is endemic in many parts, all these studies with OD cut off of 0.5 might have actually over diagnosed ST and hence the results have to be cautiously interpreted [3-5]. Since the OD cut off is going to be influenced by geographical location and degree of endemicity, it is imperative to use location specific OD cut off to diagnose ST [4]. Conducting epidemiological studies to identify the OD cut off in the normal population would be challenging and not feasible. The Government run laboratories in the district and state headquarters can pitch in and publish district- or state-wise OD cut off based on the previous samples tested, which can be regularly updated with time.

Timely diagnosis is crucial in reducing morbidity and mortality of ST in children, and since ST PCR is not freely available everywhere, earliest laboratory confirmation is often done by serology by IgM ELSIA after 5-7 days of fever onset [2]. While IgM ELISA serology testing to diagnose ST is affordable, easy-to-use, with reasonable diagnostic accuracy for screening and diagnostic purposes, regional cut-offs should be identified and maintained by regional health authorities and should be validated from time to time in order to prevent misdiagnosis.

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AUTHORS' REPLY

We thank the authors for their comments about our article [1]. In exercises of determining the cutoff for diagnostic tests, it is inevitable that some amount of misclassification would always happen. We always try to minimize this risk but there is no way to eliminate it altogether. It is thus possible that the published studies, by using the cut-off of OD values of >0.5, would have over-estimated the proportion of *Orientia tsutsugamushi* infection among probable scrub typhus patients. We also feel that conducting well-planned epidemiological studies to estimate regional cut-offs in scrub typhus endemic area would be challenging without involving credible laboratories. Such studies would need sera from sufficient number of patients with detailed granular data on clinical details from a given region. The feasibility of involving district/state public health laboratories and using previous samples, as suggested by the authors, would therefore need a careful consideration before such studies are initiated.

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Variation in Tribe-Specific Mortality Indicators of Child Health in India: Emphasizing Tribe-Specific Action Plan

Under-five mortality exhibits uneven distribution, incurring heavy toll among tribal population compared to non-tribal population in India. This necessitates the persistent need for research on tribe-specific indicators of child mortality and life expectancy in India. In this context, Verma, et al. [1] provided tribe-specific estimates of infant mortality rate (IMR), under-five mortality rate (U5MR) and expectation of life at birth (LEB) for 123 tribes in India using Census 2011 data. As is evident from the study, majority of selected tribes depicted higher IMR and U5MR than the national average and the total scheduled tribe (ST) population. The study not only highlighted immense difference in these estimates among tribal and non-tribal population, but also the differences in the estimates among tribes residing in different states and even within the same state.

The above findings are critical with respect to availability of maternal and child health care services and the sporadic success of related government flagship programs in achieving universal health coverage in tribal areas. Although the study acknowledges the need to develop programs to reduce the gap in child mortality and life expectancy within tribal population and between tribal and non-tribal populations, but it left scope for many unaddressed questions. It is important to explore the factors underpinning such huge gap in the indicators of child mortality and life expectancy among tribal and non-tribal populations in India.

Socio-cultural, economic and environmental factors varying across states and social groups play a critical role in uneven distribution of child mortality and life expectancy between tribal and non-tribal populations and even within tribal