

Impact of Screen Time [PHONES T.V., SOCIAL MEDIA] on Snacking Frequency in Children [5–14 Years] of Meerut District

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ABSTRACT: Children today spend a good part of their day in front of some screen or another, and parents often wonder how much of an effect this really has on the way their kids eat. That question is what this study set out to answer. Fifty parents of children aged 5–14 years in Meerut district, Uttar Pradesh, were interviewed using a structured questionnaire as part of a cross-sectional descriptive study, and their answers were analysed using simple frequency and percentage calculations, then laid out in tables and graphs. What came out of the data was fairly consistent: television and mobile use both hovered around 1–2 hours a day for most children (36% and 32% respectively), and screen use was heaviest in the afternoon (56%) rather than morning or night. YouTube Shorts turned out to be the clear favourite among children (42%). Eating in front of a screen was the norm rather than the exception 34% of children always ate this way, and only 8% never did. Interestingly, when parents were asked why their children snack during screen time, taste (26%), hunger (24%) and habit (24%) came up far more often than advertisements (8%), which goes against the common assumption that ads are the main culprit. Nearly half the parents (46%) also mentioned that their child gets irritated if the screen is taken away mid-meal. Taken together, these findings suggest that screen time and snacking have become tightly woven into daily routine for many children in Meerut, and that the fix probably lies less in banning screens outright and more in building steadier mealtime habits and a bit more mindfulness around eating.

KEYWORDS: children, dietary habits, television, mobile phones, screen time, snacking behaviour,

1. INTRODUCTION

It's hard to find a household today where children aren't surrounded by screens in one form or another. Televisions, smartphones, tablets and computers have quietly become part of how children learn, play and connect with others, and this shift has happened fast — fast enough that concerns about its side effects, particularly on eating habits, are only now catching up (WHO, 2019; Rideout & Robb, 2019). Screen time is usually understood as the total time spent on these devices, whether it's passive watching or active use like gaming, and a fair amount of research already links it to sitting still for long stretches and picking up unhealthy habits along the way. One recent estimate put daily screen use among 6–14-year-olds at around 2.77 hours, with close to half of them (46.4%) going well past the two-hour limit that health bodies generally recommend (Qi et al., 2023).

The 5–14 age bracket matters here because this is exactly when children are forming habits that tend to stick — physically, mentally and behaviourally and they're still too young to fully see through advertising or media influence the way an adult might. Because of this, food advertisements can leave a real mark on what they want to eat and how often they reach for a snack (Cairns et al., 2016). There's also the matter of "mindless eating" children glued to a screen often eat without really noticing they're full, which naturally pushes up how much they end up consuming (Pearson & Biddle, 2011). And it doesn't help that so much of what children see on screens — bright animations, catchy jingles, influencers eating on camera — is designed specifically to make sugary, salty, energy-dense food look irresistible (Hastings et al., 2006; Cairns et al., 2016; Temple et al., 2017).

None of this is harmless in the long run — children who snack heavily during screen time face a higher chance of becoming overweight, developing poor nutrition, and down the line, running into chronic health problems (Kelishadi et al., 2016). Late-night screen use adds another layer to this, since it tends to disturb sleep, and poor sleep has its own way of pushing children toward late-night snacking (Chaput et al., 2017). Television and mobile devices don't quite work the same way, though: TV tends to expose children to more passive eating and ad content, while phones and social media invite quicker, more frequent, and less structured snacking through content that feels personally tailored to them (Harris et al., 2009; Pearson & Biddle, 2011). And of course, none of this happens in a vacuum — how much freedom a child has around screens, and whether screens are allowed during meals, often

comes down to parenting style and household circumstances, both of which shape eating habits considerably (Birch & Fisher, 1998; Pearson et al., 2017).

In India specifically, cheap internet and fast-growing towns have made screens more accessible to children than ever, and the COVID-19 pandemic only sped things up further — online classes and locked doors meant more screen hours, and many of those habits never really went away even after schools reopened (Pietrobelli et al., 2020). Meerut district, like many semi-urban parts of the country, is going through this same shift: children are more sedentary, and processed food is easier to get hold of than before. Yet very little research has actually looked at how screen time and snacking connect in a setting like this (ICMR, 2020). That gap is really what prompted this study — an attempt to understand, specifically among children aged 5–14 years in Meerut district, how screen time relates to how often they snack.

Hence this study will follow these objectives: To assess the average daily screen time among children aged 5–14 years, To determine the frequency of snacking during screen time, To identify common types of snacks consumed screen time, To examine the association between duration of screen time and snacking frequency.

2. MATERIALS AND METHODS

This study used a cross-sectional descriptive design, which simply means data on screen exposure — television, mobile phones and social media — and snacking behaviour were collected at one point in time, without changing or controlling anything about the children's routines. It was carried out in Meerut district, Uttar Pradesh, a location chosen because it has a mix of urban and semi-urban pockets that are currently going through the kind of lifestyle shift this study wanted to capture.

Participants were children aged 5–14 years living in Meerut district. Where the child was old enough, information came directly from them; for younger children, parents or guardians stepped in to answer on their behalf. In total, 50 respondents took part, chosen through convenience sampling essentially, whoever was available and willing, with parents giving consent before their child was included.

Inclusion criteria: children aged 5–14 years, residing in Meerut district, exposed to screen devices (television, mobile phones, tablets, computers or social media), with parental consent, and available during data collection.

Exclusion criteria: children below 5 or above 14 years, those with chronic illness affecting dietary habits, those with no screen exposure, and incomplete or inconsistent questionnaires.

A structured questionnaire use, was the main tool for data collection. It asked about basic socio-demographic details, how much time children spent on screens and in what pattern, how often they snacked while using screens and what they typically ate, and parents' own observations of their child's eating and screen habits. Once collected, responses were checked, coded and tabulated, then run through basic descriptive statistics — mainly frequencies and percentages and turned into tables, bar charts and pie charts for easier reading. Patterns across different age groups were compared where relevant, and the results were read alongside existing literature to make sense of what they meant for the study's objectives.

3. RESULTS AND DISCUSSION

The results below walk through who the 50 respondents were, how much time their children spent on screens, what and how often they snacked while doing so, and how these two things seemed to line up. All tables and figures are presented exactly as they were originally prepared, without any alteration to the data.

Table 4.1: To assess the average daily screen time among children aged 5-14 years.

ASPECTS	OPTIONS	FREQUENCY [N=50]	PERCENTAGE
Average daily T.V watching	Less than 1/2 hour	7	14%
	Less than 1 hour	14	28%
	1-2 hour	18	36%
	2-3 hour	11	22%

Average daily mobile phones/tablet use [games, videos, social media]	Less than 1/2 hour	15	30%
	Less than 1 hour	10	20%
	1-2 hour	16	32%
	2-3 hour	9	18%
At what time is your child's screen use highest?	Morning	0	0%
	Afternoon	28	56%
	Evening	14	28%
	Night	8	16%
What type of content does your child mostly watch?	Cartoons	14	28%
	Educational videos	2	4%
	Gaming content	11	22%
	Youtube shorts	21	42%
	Food related videos and shorts	2	4%

television, the 1–2 hour bracket was the most common (36%), with less than 1 hour (28%) and 2–3 hours (22%) not far behind. Mobile phones and tablets followed a similar pattern, peaking at 1–2 hours (32%), though a fair number of children used them for under half an hour (30%) or under an hour (20%) — so overall screen exposure looks moderate rather than extreme. As for timing, the afternoon was clearly the busiest period for screens (56%), well ahead of evening (28%) and night (16%); not a single child in this sample reported the morning as their peak screen-use time, likely because school hours occupy that slot. Content-wise, YouTube Shorts was the runaway favourite (42%), followed by cartoons (28%) and gaming (22%), while educational content (4%) and food-related videos (4%) barely registered. This lines up with what other researchers have already observed — that short, fast-paced entertainment tends to dominate children’s screen habits, which can crowd out physical activity and expose them to more food marketing along the way (Pearson & Biddle, 2011; Rideout & Robb, 2021).

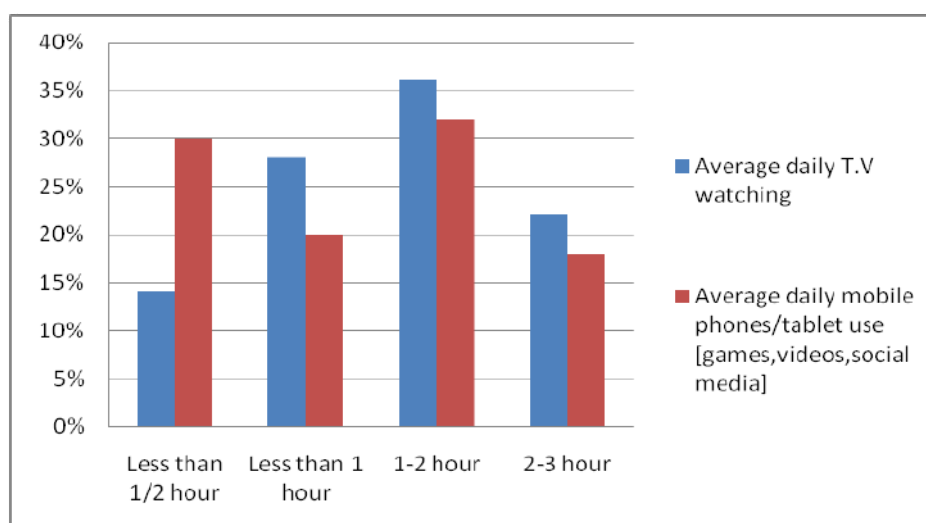


Figure 1: Comparative overview of television and mobile watching time

Side by side, TV and mobile use look fairly similar — both peak at 1–2 hours (36% and 32%). But look closer and a few differences show up: more children use mobiles for very short bursts under 30 minutes (30% vs. 14% for TV), while TV wins out slightly for the under-an-hour bracket (28% vs. 20%). At the longer end, TV also edges out mobile use for 2–3 hours (22% vs. 18%), hinting that prolonged viewing is still a bit more of a TV thing than a phone thing in this group.

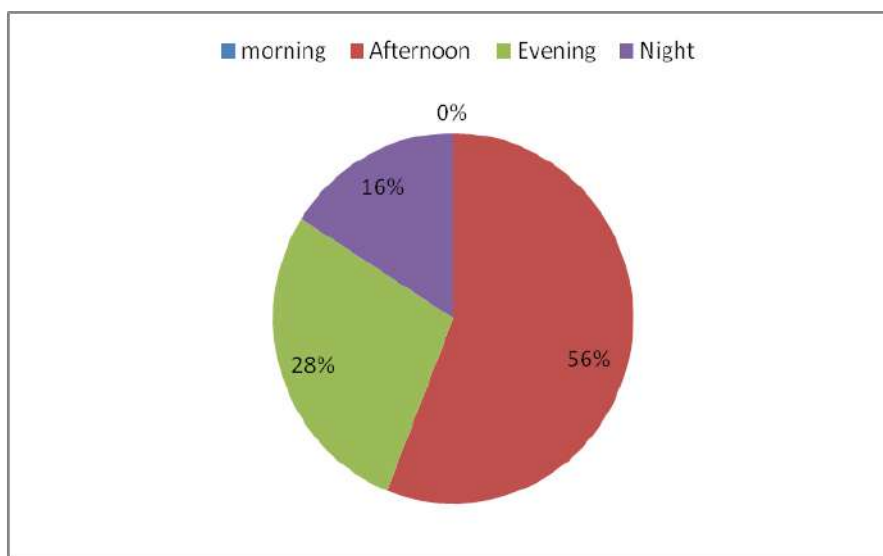


Figure 2: Highest screen-time use in a whole day

Afternoons are clearly when screens come out the most — 56% of children peaked here, most likely once they’re back from school with free time on their hands. Evening (28%) and night (16%) trail behind, and mornings don’t register at all, which makes sense given school and morning routines fill that window instead.

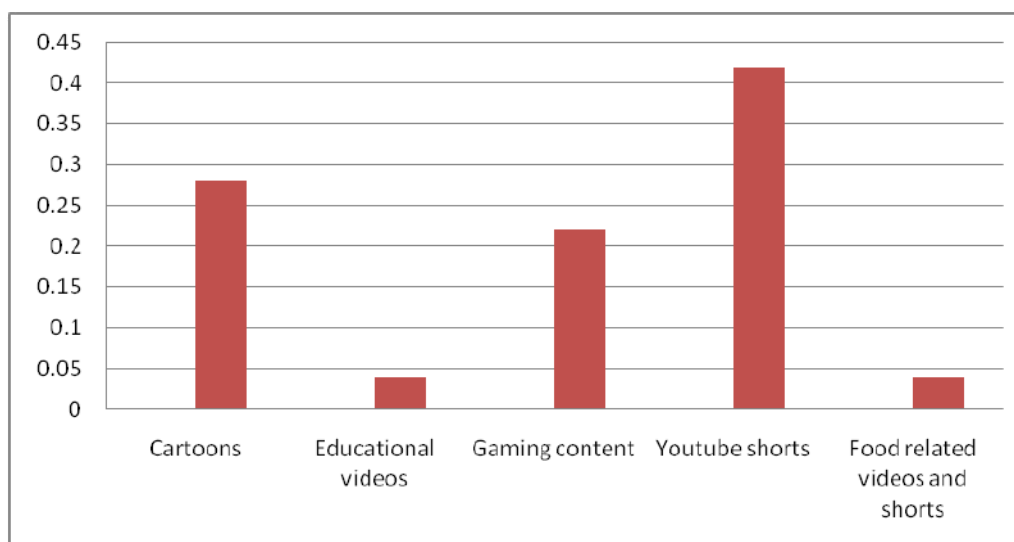


Figure 3: Overview of content mostly watched by the children

YouTube Shorts sits well ahead of everything else at 42%, with cartoons (28%) and gaming (22%) trailing behind. Educational videos and food-related shorts barely make a dent at 4% each — a pretty clear sign that when children pick up a screen, they’re after quick entertainment, not learning.

Table 4.2: Common types of snacks consumed during screen use (N = 50)

Food Item	Never	%	1-2 d/wk	%	3-4 d/wk	%	5-6 d/wk	%	Daily	%
HEALTHY / NUTRIENT-DENSE SNACKS										
Fresh fruits	4	8%	20	40%	12	24%	5	10%	9	18%
Fruit chaat	17	34%	22	44%	3	6%	4	8%	4	8%
Nuts and Seeds	9	18%	16	32%	10	20%	6	12%	9	18%
Roasted makhana/chana	8	16%	24	48%	5	10%	4	10%	9	18%
Sprouts	21	42%	14	28%	5	10%	5	10%	5	10%
Home-made snacks (poha, upma, dhokla)	5	10%	15	30%	8	16%	4	8%	18	36%
PATTERN OF READY-TO-EAT FOOD AND SNACK CONSUMPTION										
Chips/Namkeen	11	22%	21	42%	12	24%	2	4%	4	8%
Biscuit/cookies	12	24%	16	32%	7	14%	5	20%	10	20%
Chocolates/Candies	8	16%	24	48%	5	10%	3	6%	10	20%
Fast food (burger, pizza, noodles)	20	40%	17	34%	6	12%	5	10%	2	4%
Soft drinks	19	38%	16	32%	4	8%	8	16%	3	6%
Packaged juices	22	44%	11	22%	10	20%	4	8%	3	6%
Fruits	7	14%	17	34%	8	16%	6	12%	12	24%
Home-made snacks	6	12%	22	44%	5	10%	10	20%	7	14%

Looking at the healthier snack options first, fresh fruits, roasted makhana/chana and sprouts were each eaten daily by 18% of children, but home-made snacks came out on top with 36% daily consumption — so despite all the screen time, traditional home food still holds its ground. On the processed side, fruits again topped the daily list at 24%, with biscuits/cookies and chocolates/candies close behind at 20% each; fast food (4%), soft drinks (6%) and packaged juices (6%) were eaten daily by far fewer children. This broadly matches what Pearson et al. (2014), Hare-Bruun et al. (2011) and Boyland et al. (2016) have reported elsewhere — that screen time tends to push up snacking frequency generally, without necessarily ruling out healthier choices alongside the processed ones.

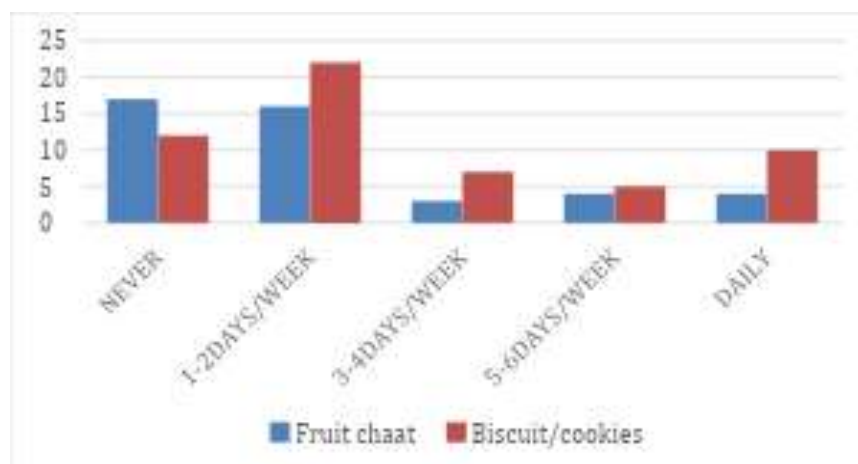


Figure 4. Comparative analysis of fruit chaat and biscuit/cookies consumption

Fruit chaat actually beats biscuits/cookies at the lower end of the scale — more children never eat it or eat it just 1–2 days a week (34% and 44%, against 24% and 32% for biscuits). But flip to the higher-frequency end and biscuits pull ahead: 3–4 days/week (14% vs. 6%), 5–6 days/week (20% vs. 8%), and daily (20% vs. 8%). So while a good number of children still enjoy fruit chaat occasionally, biscuits and cookies are clearly winning the battle for regular, everyday snacking.

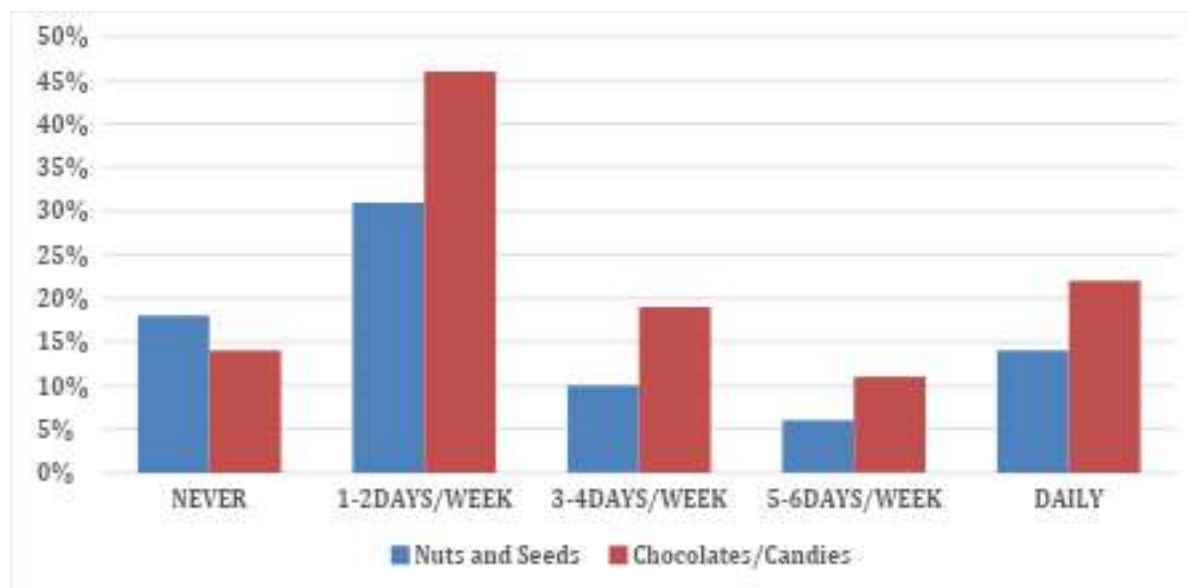


Figure 5: Comparative analysis of nuts & seeds and chocolates/candies consumption

A bit more of the sample had never tried nuts and seeds (18%) compared with chocolates and candies (14%). Both were most commonly eaten just 1–2 days a week, though chocolates/candies pulled well ahead here too (46% vs. 31%). And across every higher-frequency category — 3–4 days/week, 5–6 days/week, daily — chocolates and candies consistently beat out nuts and seeds. Not a huge surprise, but it does confirm that the sweeter option wins out over the healthier one whenever there's a choice.

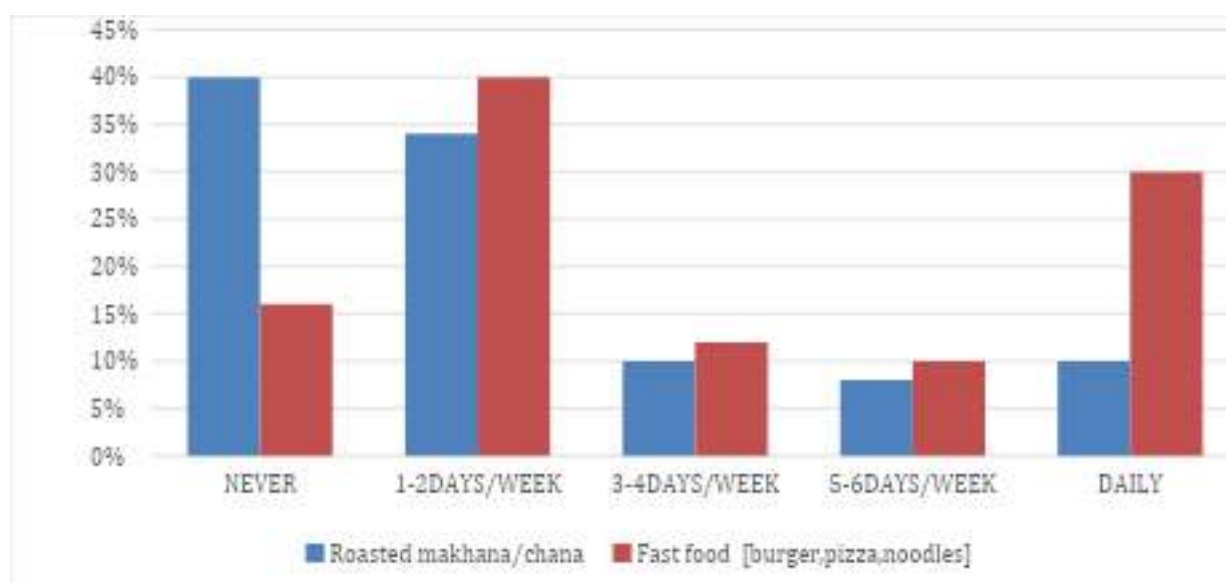


Figure 6: Comparative analysis of roasted makhana/chana and fast food consumption

This comparison is fairly stark: 40% of children had never eaten roasted makhana/chana, while only 16% could say the same about fast food. Fast food also showed up more often at the 1–2 days/week mark (40% vs. 34%), and the gap really widens at the daily level — 30% of children ate fast food every day, compared with just 10% for makhana/chana. However you look at it, fast food is clearly the more habitual choice here.

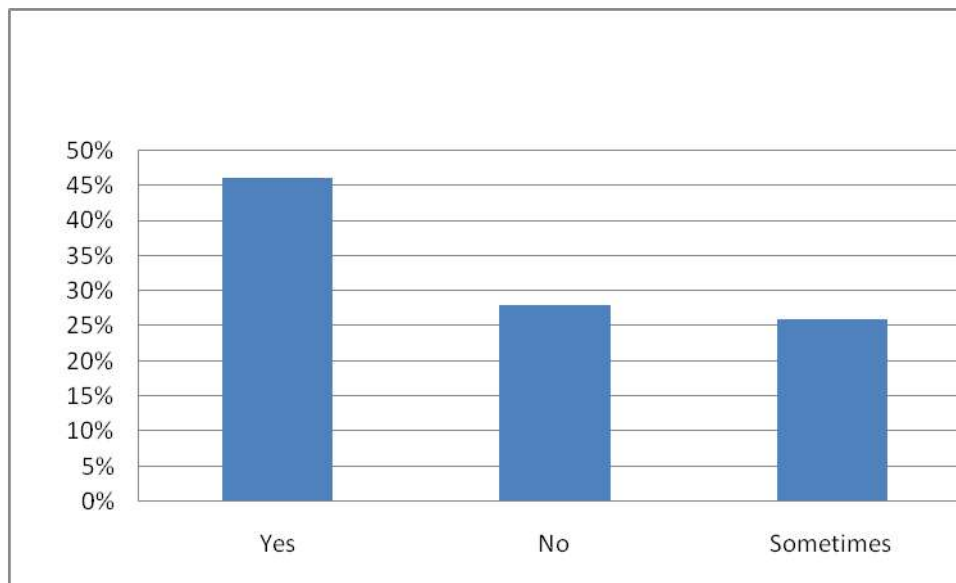


Figure 7: Child gets irritated if screen time is stopped during eating

Just under half the parents (46%) said their child gets irritated when the screen is switched off during a meal, while 28% saw no such reaction and 26% said it happens only sometimes. It seems a fair number of children have simply gotten used to having a screen around while they eat.

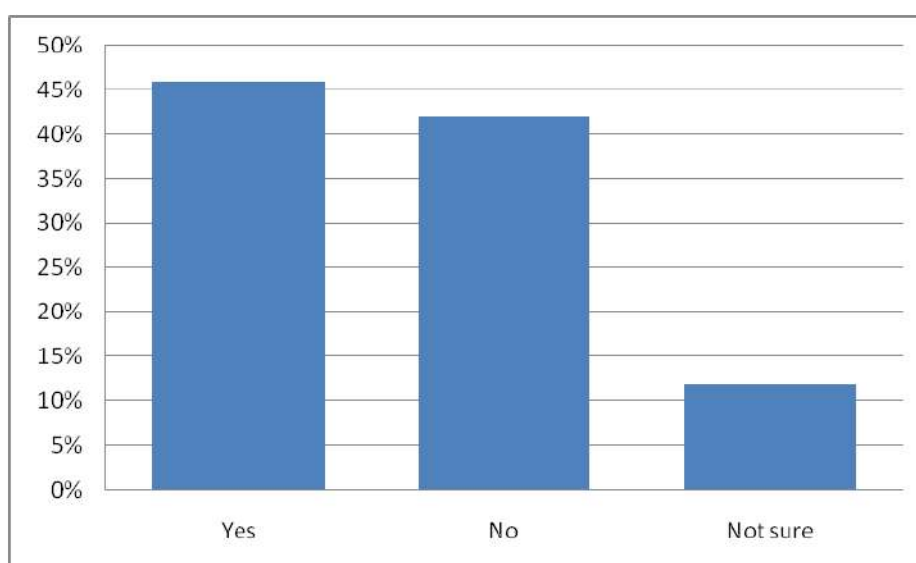


Figure 8: Parents' perception of increased demand for junk/outside food due to screen time

Parents were nearly split down the middle here — 46% didn't think screen time had increased their child's appetite for junk or outside food, 42% felt that it had, and 12% simply weren't sure. So the jury's still out among parents themselves on this one.

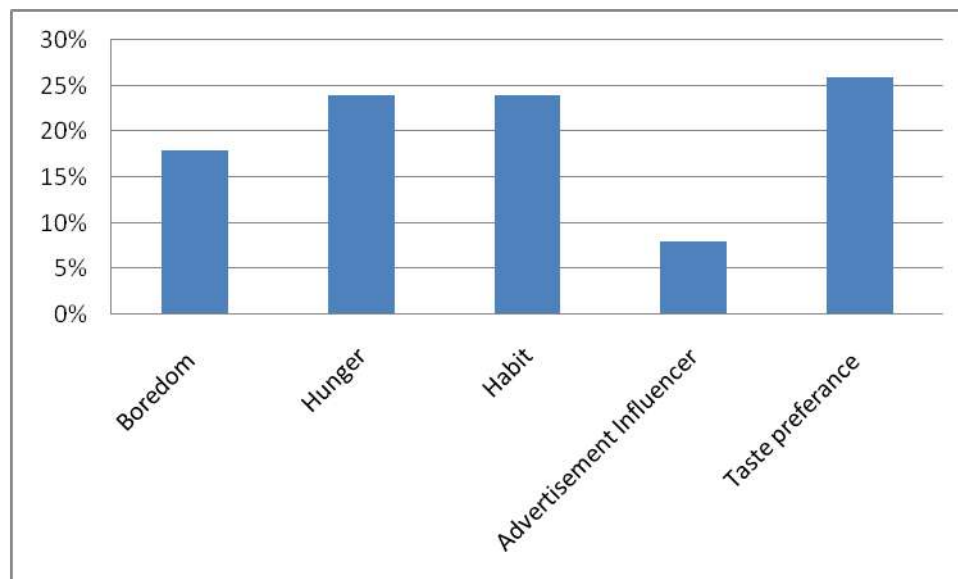


Figure 9: Distribution of ranking for children's snacking during screen time (1 = most important)

When parents ranked the reasons behind their child's snacking, taste preference came out on top (26%), with hunger and habit tied close behind at 24% each. Boredom (18%) and advertising (8%) landed at the bottom, suggesting that what really drives snacking during screen time is personal taste and routine, not the ads children are watching

5. CONCLUSION

This study began with a fairly simple question does screen time change how children eat? and the answer turned out to be more layered than a straightforward yes or no. Screen use hasn't just pushed snacking up in Meerut district; it has quietly changed the setting in which eating happens for many children. Eating and screen use no longer look like two separate parts of a child's day they've blended into one routine, and the irritation children show when that routine is broken says as much. In a sense, the screen has become less of a distraction during eating and more of a companion to it. Just as telling is the gap between what parents intend and what they actually manage to do most recognise the risks and try to set some limits, but sticking to those limits consistently is another matter, and that gap probably deserves more attention than the snacking numbers themselves. The study also pushes back a little on the idea that advertising is the main villain here; taste, habit and routine came through as the stronger forces. In the end, tackling screen-related snacking probably has less to do with banning screens or foods outright, and more to do with breaking the everyday link between the two something that calls for steadier parental routines and a bit more mindfulness around eating, built up gradually rather than imposed all at once.

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