

Sustainable Behaviour Amongst School Students

A survey to assess sustainable practices amongst school students in their day to day routines

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Citizen consumer and civic Action Group (CAG) is a 38-year-old, non-profit, non-political, and professional organisation that works towards protecting citizens' rights in consumer and environmental issues and promoting good governance processes including transparency, accountability, and participatory decision-making.

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Executive summary

In the present day, as we witness the effects of our human actions in the form of climate change, with melting icebergs, receding ocean shores, increasing sea levels, reduction in soil fertility and many more worrying changes, it is becoming apparent that it is human behaviour that needs to change. Without this, it is impossible that we can keep our commitment to the <u>Paris Agreement</u>, and to mitigate any of the impacts of climate change. Changing 'human behaviour' runs the gamut from changes in individual behaviour to community changes, to large scale changes among corporates and governments.

Modern life, with its consumerist focus, and fast pace, also demands behaviour changes. Within the Indian context, (and this is certainly true of several other parts of the world also), there remain some sustainable lifestyles patterns, which families might have imbibed from previous generations. These are likely more suited to a harmonious use of natural resources. As the pace of modern life quickens, there is a temptation to leave behind these sustainable habits, and plunge into a lifestyle of convenience. These changes typically accompany a rising economic status and can quickly modify sustainable habits of entire communities, pushing us in the wrong direction.

This survey among school students aimed to take stock of such traditionally sustainable behaviours and if these are already losing ground among the younger generation. The survey focused broadly on sustainable mobility, electricity consumption at home, water consumption, and waste disposal. The survey was delivered to 2234 children from classes six to nine in ten city schools (Chennai). The findings indicate that there are noteworthy sustainable behaviours which have not changed much from previous generations. These include behaviours like bathing with a bucket and a mug, or handing down old books and notebooks to siblings. However, transport and energy use remain areas of concerns, as it was observed that even children that lived within a small radius from school were still dependent on some form of motorised transport to reach school. Use of air conditioners also appears excessively high.

1 Introduction

Sustainability is an integrated approach that balances environmental and economic concerns. The <u>United Nations</u> Brundtland Commission defines sustainability as 'meeting the needs of the present without compromising the ability of future generations to meet their own needs'. In 2015, the United Nations (UN) adopted the Sustainable Development Goals (SDGs) to end poverty, protect the environment, and ensure peace and prosperity for all by 2030. These goals are not just lofty ideals but a practical framework for improving the lives of populations worldwide and mitigating the harmful effects of climate change caused by human action. The findings from our survey, which align with several of these goals, can help guide our efforts in promoting sustainable practices among students in Chennai and Tamil Nadu and contribute to global sustainability targets.

India has made significant strides in technology and economic growth. Presently, we are also implementing measures towards sustainability with new initiatives, like the PM Surya Ghar Muft Bijli Yojana (scheme for installing rooftop solar panels for households), Swachh Bharat - Swasth Bharat (Clean and Healthy India), Satat Bharat – Sanatan Bharat (Sustainable India), etc.

Alongside these is the economic growth of the country, which is mostly perceived as <u>positive</u>. It is not unusual for families whose finances are improving to want to update their lifestyles. These updates could easily turn families away from sustainable behaviours and routines learnt from previous generations that might have lived on sparser resources, and/or, a better awareness of harmonious living. <u>Studies</u> indicate that growing affluence, and the resulting over-consumption can pose a serious threat to exceeding planetary boundaries.

2 RATIONALE OF THE STUDY

The aim of the study was to understand sustainable behaviours within the daily routines of school students.

3 Study Methodology

The study was conducted in seven private schools and three government schools in Chennai city, among children in grades 6 - 9. The survey <u>questionnaire</u> consisted of multiple choice questions, designed to elicit an insight into the students' day to day routines that could be interpreted as sustainable. The researchers made no differences in analysing responses as sustainable because of traditionally inculcated values, or because of taught values or the students' own desires to be sustainable. The survey's aim was only to measure behaviour. A total of 2234 responses were received and analysed.

3.1 Survey Findings

3.1.1 Distance between home and school

The results indicate a roughly even, four-way split between the four options (less than 1 km, 1-2 km, 2-4 km, and greater than 4 km). 27.9 % of students live within a 1 KM radius of the school. According to the statutory walking distance set by the <u>UK</u> government to calculate acceptable home to school distances, it is two miles (3.2 km) for children under eight years of age and three miles (4.8 km) for pupils aged 8–16 years. Allowing for weather conditions in Chennai and halving these distances, at least 57% of students (i.e., those living within a 2 km radius) could be walking to school .



Figure 1- The distance between home and school

3.1.2 Getting to school - daily transportation

In contrast to what was hypothesised above, only 26.7% of children walk or cycle to school. The rest are dependent on some form of motorised transport.



Figure 2 - Mode of transportation used to commute

3.1.3 Usage of ACs at home

79.6% of the students use air-conditioners at home.



Figure 3- Usage of ACs at home

3.1.4 Usage of AC based on the season

Nearly half of the respondents use air conditioners (ACs) throughout the year. ACs are a modern convenience that has replaced wide open spaces and houses that used to be built to maximise air circulation. With urban crowding, air conditioners are one of the easier ways of making small spaces comfortable. However, use of this needs to be moderated with energy efficient and energy conscious practices. While Chennai is known to be hot for much of the year, there is also a brief respite from the heat at the end of the year. It is a worrying trend then that families are dependent on air conditioners for all of the year. This trend of all year use also seems to exceed predictions by the India Cooling Action Plan, according to which ACs are used on average for eight months of the year in the country.



Figure 4- Seasonal usage of AC's

3.1.5 Air conditioner usage by hours of use

This question tried to understand everyday AC consumption patterns. 29.3% of respondents use ACs for an average of 3-5 hours, and a similar percentage of students use ACs for more than 6 hours daily.

B. How many hours per day do you use it? 1,818 responses



Figure 5- Usage of ACs in a day

3.1.6 Turning off electrical appliances

68% of the respondents revealed that they turn off electrical appliances at the plug point, which shows energy-saving practices at home. The fact that very few respondents put their devices in sleep mode can be seen as a positive sign. However, on the other hand, 43 % of students switch off electrical items using the remote and 7.9% place it in sleep mode. More awareness is required, as devices consume electricity even in sleep mode.



Figure 6- Usage of ACs

3.1.7 Daily routines - bathing

This question aimed to find out water usage while taking a bath. 70% of the students report using a bucket and a mug, which can be considered the traditional form of bathing and perhaps, the more resource efficient method. The second most reported was a top-mounted shower.



Figure 7- Different ways of taking a bath

3.1.8 Time taken for showers

Almost 50% of students took an average of 15-20 minutes to finish their showers, with 16.3% of respondents taking longer than 20 minutes. While it is hard to arrive at an acceptable time span for a shower, it is likely that reductions are possible, as indicated by 35.9% of the respondents who take less than 10 minutes for a shower.

9. How much time do you take to complete your shower? 2,165 responses



Figure 8- Duration of your shower

3.1.9 Carrying own water bottles

Carrying own water bottles as opposed to buying packaged water is considered the safer, more sustainable option. It was good to note that almost 90% of respondents have inculcated the habit of carrying their own water bottles.



Figure 9: Rate of students carrying their own water bottles while travelling.

3.1.10 Kind of water bottles carried

73% of the students carry steel water bottles while travelling. Plastic bottles, when exposed to the heat of the sun, can break down, leaching microplastics into the water.

Steel water bottles are therefore the safer option. However, plastic bottle usage was still high, at 34%.





Figure 10- The kind of water bottles carried

3.1.11 Reusing notebooks with unused pages

At the end of the school year, it is not uncommon for students to be left with half-used notebooks. Traditionally, these unused pages would be re-used in some form - either to form a new notebook altogether, or as rough paper. 58.5% of students surveyed report reusing their notebooks. 6.5% of students do report throwing these away. Unused paper should be re-used. Used paper can either be recycled, or composted, returning valuable carbon back to the soil again.



Figure 11- Reusing notebooks with unused page

3.1.12 Old books/ reading materials

36% of students habitually donate their old books to friends or juniors. 33 % of students report giving their old books to the waste paper store, from where it eventually goes to be recycled. About 7.4% of students are throwing these away, where these could potentially end up as litter, or in dumpyards.



Figure 12- Reusing old books and reading materials

3.1.13 Waste disposal practises at home

38 % of students report segregating their waste. Further, 33% of students report composting organic waste. However, 28% of students still dispose of waste without any segregation, indicating the need for further awareness. 0.5 % of students were also unaware of the waste disposal practices followed within their households.



Figure 13- Waste disposal practises at home

Conclusion

The results of the survey indicate mixed findings. The low use of sustainable transport (walking, cycling or taking the bus) is clearly a problem. However, considering that India has poor road safety statistics and that our public transport network is a smaller-than-recommended fleet, prone to overcrowding and with poor time keeping, it might be that students are not left with many sustainable options of travel. Over-use of air conditioners is also a worrying trend and one that is likely to worsen as our city population grows denser. This needs to be addressed with better awareness and education. It appears that students do retain some aspects of the traditionally sustainable forms of living such as reusing notebooks, or bathing with a bucket and a mug. This is commendable. However, as family finances improve, it is likely that sustainable practices such as these could be replaced with resource-intensive, use and throw habits. Overall, students need to be frequently reminded of their part in creating sustainable communities,

and thus addressing climate change. Without this, it is likely that currently sustainable habits of living will be lost to future generations.



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