

Original Articles

## Patterns of television viewing and associated factors among adolescent school children in the Anuradhapura Educational Zone, Sri Lanka

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### Abstract

**Background:** The popularity of screening media and its influence on the younger generation is an emerging worldwide public health problem. The scarcity of statistics become more evident in Sri Lanka compared to the world. For timely interventions, identification of patterns of screening media usage is a national demand.

**Objective:** To describe the television (TV) viewing patterns and associated factors among adolescent school children in Anuradhapura Educational Zone

**Method:** This is a descriptive, cross-sectional study. The sample size was 2060, selected using two staged cluster sampling and random sampling. A pre-tested, self-administered questionnaire was used.

**Results:** Response rate was 87%. Almost 97% of the sample had a TV at home and 92% of them had it in their living room. A majority of 94% were watching TV under parental supervision. Mean TV viewing time per week was 23.6 hours. Mean time spent for extracurricular activities per week was 9.3 hours.

**Conclusions:** TV viewing time per week was high compared to mean time spent on extracurricular activities.

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(Key Words: Television viewing, adolescents, Sri Lanka)

### Introduction

The popularity of screen media and its influence on the younger generation is increasing each day worldwide. Although the patterns of using screen media have been researched in the developed world, published literature on television (TV) viewing time of Sri Lankan children is limited. However, informal sources suggest that Sri Lankan children also view TV for a considerable period of time. Thus, for timely interventions, identification of patterns of usage of screening media is a national need.

A panel study of income dynamics revealed an association between viewing of violence on TV and subsequent development of aggressive behaviour patterns in children<sup>1</sup>. As many young children cannot differentiate what they see from what is real, screen media make a huge impact on adolescent attitudes and behaviour. A cross-sectional study carried out in children in the United States showed that excessive exposure to screen media (TV, tablets, smartphones, computers and video games) has been associated with lower educational outcomes, increased sleep, behavioural problems (early age sexual activity), increased aggressiveness, lower self-esteem and depression<sup>2</sup>.

Evidence has suggested that there is a strong link between TV viewing time and childhood obesity<sup>3,4</sup>. They have pointed out several contributory factors such as prolonged sitting, reduction in overall daily energy expenditure due to lack of exercises and poor dietary profiles. In general, fast foods, sweet snacks and soft drinks are commonly advertised in TV and a study conducted in New Zealand revealed that children watching two or more hours of TV daily had a greater likelihood of being high consumers of frequently advertised food and a lesser likelihood of being high consumers of fruits and vegetables, than children who watched less than an hour of TV daily<sup>5</sup>. In a case study conducted among children in Galle district, Sri Lanka, the majority of children were in agreement that advertising highly influenced food demand regarding soft drink, fast food items and sweets<sup>6</sup>. Therefore, TV and advertising greatly

influence food choice and consumption pattern among the younger generation.

TV viewing also impacts on the educational performance of children. In a study done in New Zealand, excessive viewing of TV during childhood was found to be associated with poor educational achievement<sup>7</sup>. Furthermore, frequent TV users have a higher risk of developing attention and learning difficulties and have a negative attitude towards school performance, low grades and academic failure<sup>7</sup>.

**Method**

This is a descriptive cross-sectional study mainly focused on patterns of usage of TV amongst other screen media. The study was conducted from July 2016 to August 2017. The study sample was selected using a two staged cluster sampling method. Twenty-three clusters were identified from Group 1AB, Group C and Type 2 schools. Schools were chosen using probability proportionate to size of total number of schools in the Anuradhapura Educational Zone. Class-rooms from schools were selected using simple random sampling.

We decided to carry out our study among students of grades 9, 10 and 11 as we anticipated that screen media has a major impact on attitudes and behaviour of students of the adolescent age group and they are spending more time on screen media. The total sample size of the study was 2060 students with a male to female ratio of 1:1.2. Children who refused to participate in the study or whose parents did not give consent to include their children in the study and children absent from school on the date of data collection were excluded from the study. A self-administered questionnaire was distributed among the study subjects. It was prepared in Sinhala, Tamil and English languages and provided according to the participant’s choice.

The questionnaire was pre-tested in a group of ten students and necessary revisions and modifications were undertaken. At the initial contact, investigators were introduced to the study participants via the class teachers. Participants were provided with the information sheet and consent form one day before the data collection and it was filled by the participant and the parent giving permission to take part in the study. Collected data were analysed using SPSS version 21. Chi-square test was used to test

associations and a p-value less than 0.05 was considered significant. The study was ethically approved by the Ethics Review Committee of the Faculty of Medicine, University of Rajarata.

**Results**

In this study a population of 2060 students was involved where a response rate of 87% was achieved. There were 927 males and 1133 females. The male to female ratio was 1:1.2. The age distribution of the study population is shown in Table 1.

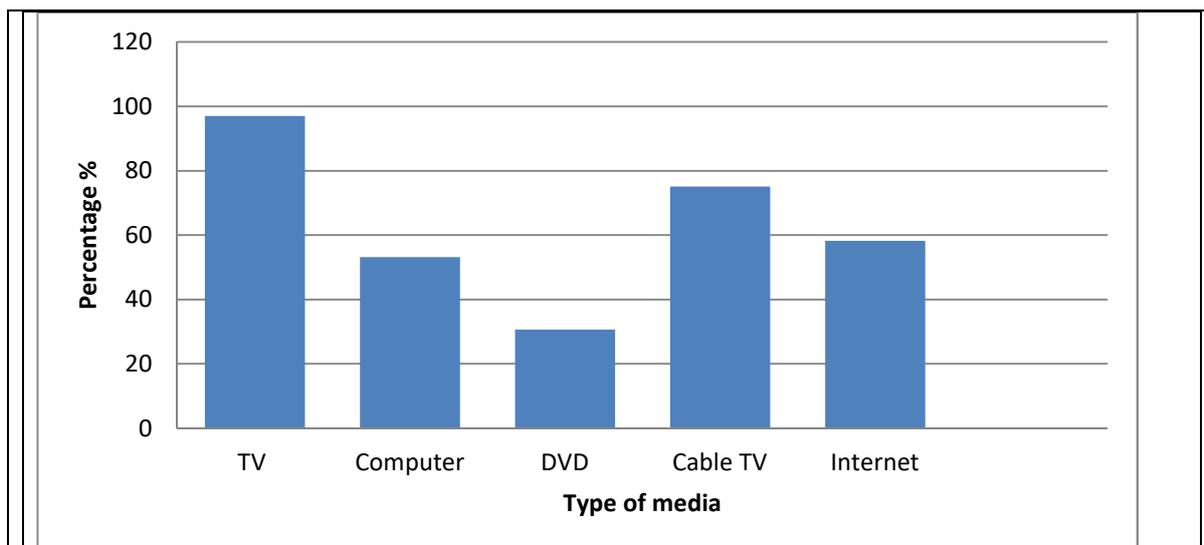
**Table 1**  
*Age distribution of the study population*

Grade (Age)	Frequency (%)
Grade 9 (14 years)	664 (32.2)
Grade 10 (15 years)	733 (35.6)
Grade 11 (16 years)	663 (32.2)
<b>Total</b>	<b>2060 (100.0)</b>

Among the study population, point prevalence of a TV at home was 97% and the point prevalence for computer, DVD player, cable TV facility and Internet facility were 53.2%, 30.6%, 75.1% and 58.2% respectively (Table 2 and Figure 1).

**Table 2**  
*Television and other media prevalence*

Availability	Frequency (%)
<i>TV available</i>	
Yes	1998 (97)
No	62 (03)
Total	2060 (100)
<i>Computer available</i>	
Yes	1096 (53.2)
No	964 (46.8)
Total	2060 (100)
<i>DVD available</i>	
Yes	630 (30.6)
No	1430 (69.4)
Total	2060 (100)
<i>Cable TV available</i>	
Yes	1547 (75.1)
No	513 (24.9)
Total	2060 (100)
<i>Internet available</i>	
Yes	1198 (58.2)
No	862 (41.8)
Total	2060 (100)

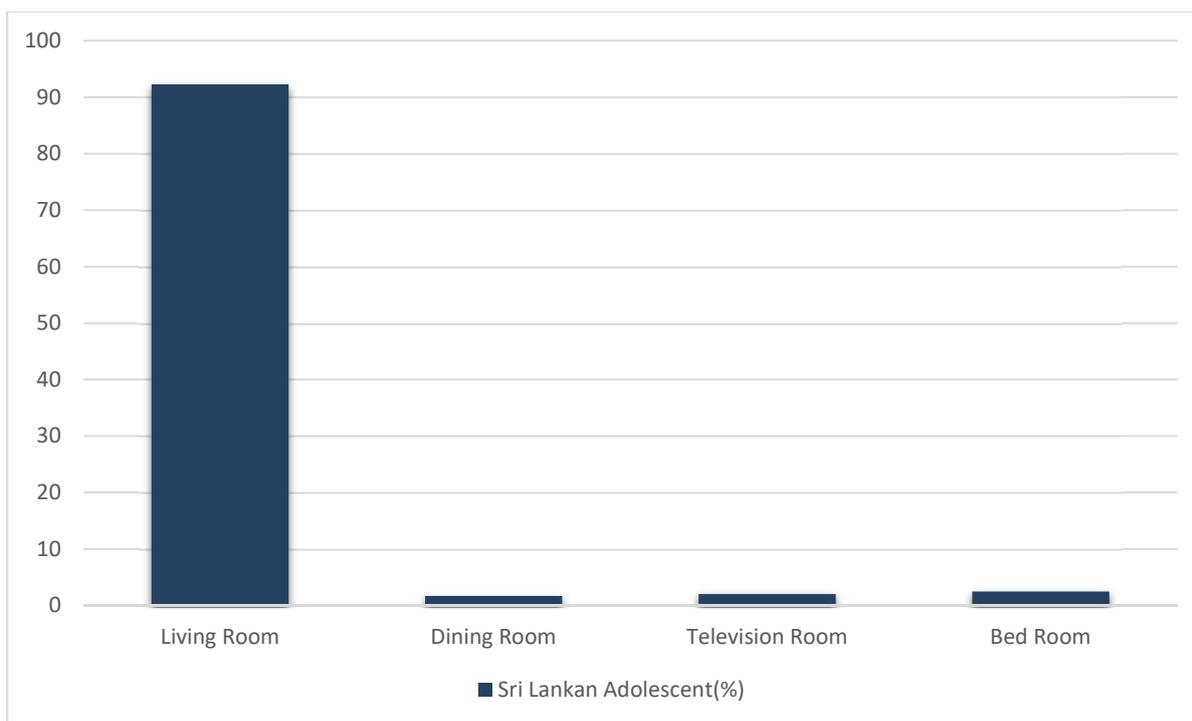


**Figure 1: Television and other media prevalence**

*Television placement at home*

Point prevalence of TV placing in the living room was 92.3% and point prevalence for TV placing in

the dining-room, television room and bedroom were 1.8%, 2.2% and 2.6% respectively (Figure 2).

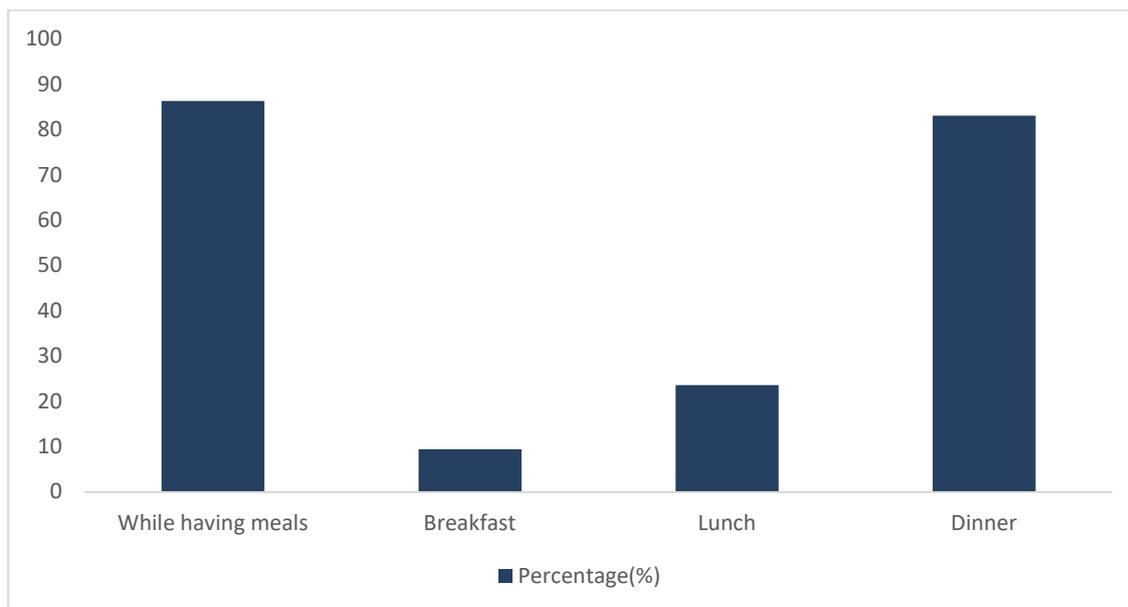


**Figure 2: Television placement at home**

*Television viewing while having meals*

Point prevalence of TV viewing while having meals was 86.3% and for TV viewing with breakfast, lunch

and dinner were 9.4%, 23.6% and 83.1% respectively (Figure 3).

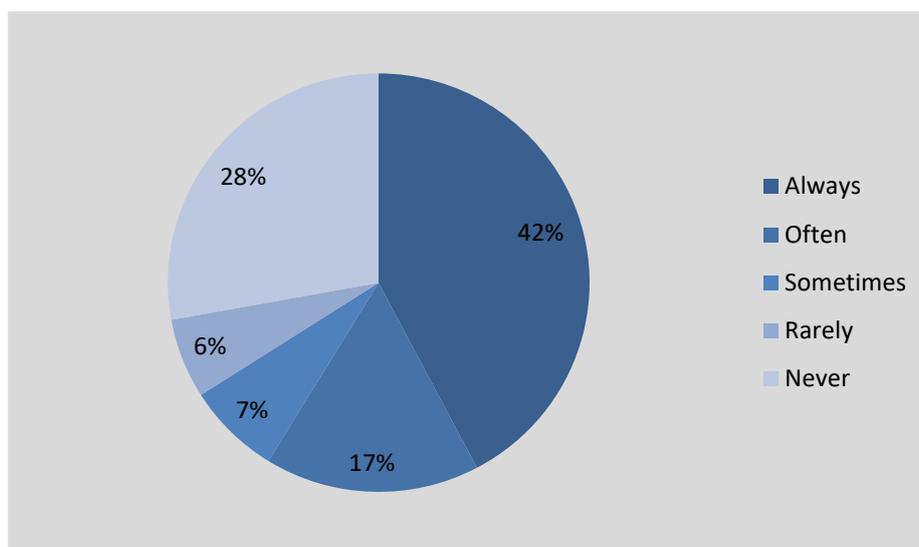


**Figure 3: Television viewing while having meals**

There was no statistically significant association between placement of the TV and having meals while watching television.

*Parental observation during television viewing*

The point prevalence of parental observation during TV viewing was 72%. Point prevalence for always and often parental observation during TV screening was 59% (Figure 4).

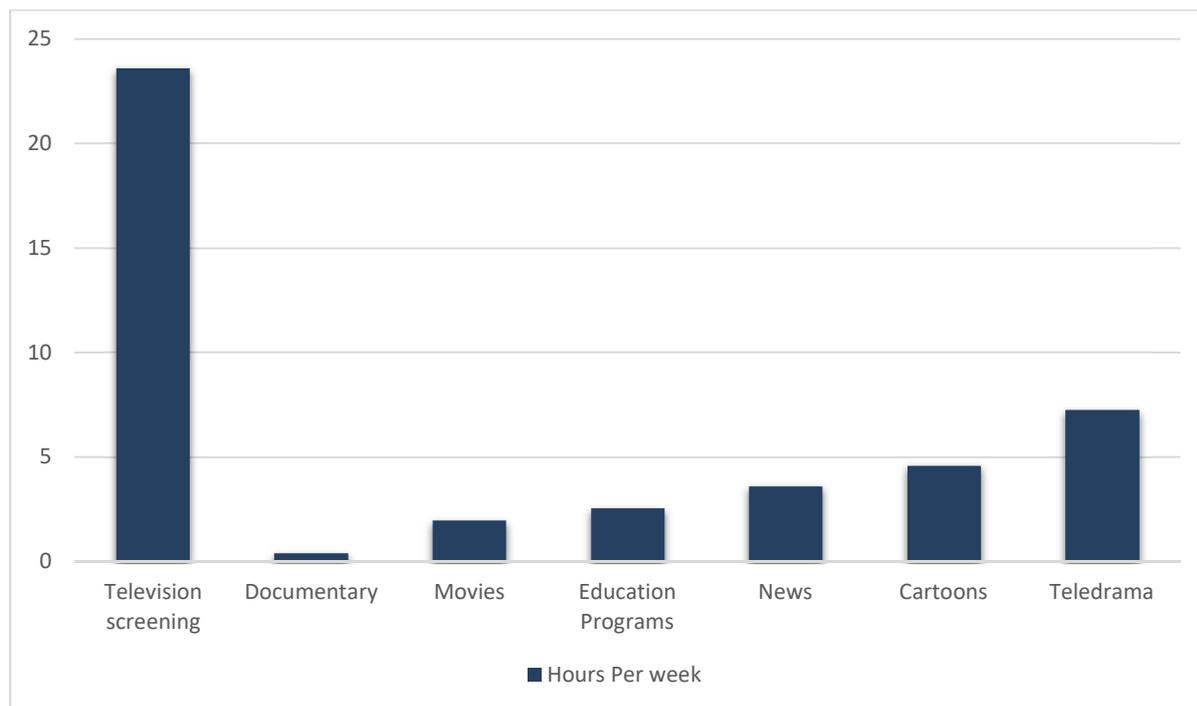


**Figure 4: Parental observation during television viewing**

*Television viewing time per week*

Mean TV viewing time per week was 23.6 hours. Mean TV screening for documentary, movies, education programmes, news, cartoon programmes

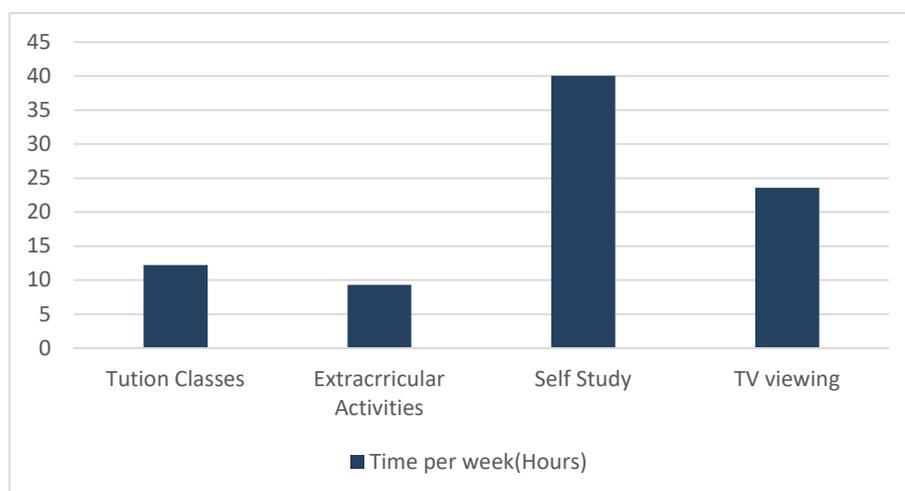
and tele-drama per week were 0.44 hours, 2 hours, 2.6 hours, 3.6 hours, 4.6 hours and 7.3 hours respectively (Figure 5).



**Figure 5: Television viewing time per week**

*Time spent for other activities during the week*  
 Mean time spent for tuition classes weekly was 12.2 hours. Mean time spent for extracurricular activities

weekly was 9.3 hours. Mean time spent for self-studying during the week was 40.1 hours (Figure 6).



**Figure 6: Time spent for other activities**

**Discussion**

Even though there are benefits from viewing some TV programmes, such as the promotion of positive aspects of social behaviour (sharing, manners, and cooperation), TV viewing has many negative influences as well. As the adolescent age group is more vulnerable to the messages conveyed through television programmes; it is important to know the pattern of TV viewing among the young generation for future rule implementation for productive television usage. The objective of our study was to describe the TV viewing patterns and associated

factors among adolescent school children in the Anuradhapura Educational Zone.

Our study results revealed that among the Anuradhapura Educational Zone the majority have a TV at home with a 97% point prevalence and they also have additional facilities such as DVD players, computers, Internet facility and cable facility. Point prevalence for DVD player, computer, Internet facility and cable facility were 53.2%, 30.6%, 75.1% and 58.2% respectively. Globally more than 79% of total household own one set of TV in virtually all developed countries and in 69% developing

countries<sup>15</sup>. Thereby our population as a developing country has reached the level of a developed country according to our research data about prevalence of a TV at home.

The results of our study suggest that the majority of youth in the Anuradhapura Educational Zone place their TV in the living room. Point prevalence of TV placing in the living room was 92.3% and point prevalence for TV placing in the dining-room, television room and bedroom were 1.8%, 2.2% and 2.6% respectively. But among all 8 to 18 year old American youth, 71% of subjects have placed the television in their bedrooms which will increase their viewing time<sup>8</sup>. A study done in Pakistan to identify factors associated with TV viewing in school children revealed that the presence of TV in the bedroom was significantly associated with excessive TV viewing<sup>16</sup>. Our study revealed a lower prevalence of TV placing in bedroom which may be because of the availability of facilities and cultural differences.

Mean TV viewing time per week was 23.6 hours. Mean TV screening for documentary, movies, education programmes, news, cartoon programmes and tele-drama per week was 0.44 hours, 2 hours, 2.6 hours, 3.6 hours, 4.6 hours and 7.3 hours respectively. A research done by the Kaiser Family Foundation regarding media in the lives of 8 to 18 year old children revealed that 8 to 18 year old American youth spent 31.4 and 3.3 hours per week watching TV and movies respectively<sup>8</sup>. Therefore, TV viewing time is still low in our population compared to the American population.

Evidence suggests that spending more time than recommended to watch TV by children has increased the rate of childhood obesity<sup>4</sup> and also that each 1-hour increment in TV viewing time was found to be associated with an 11% and an 18% increased risk of all-cause and cardio-vascular disease (CVD) mortality, respectively.

The mean time spent for tuition classes per week was 12.2 hours. The mean time spent for extracurricular activities per week was 9.3 hours. American youth spent 12.4 hours per week for physical activities<sup>8</sup> while youth in the Anuradhapura Educational Zone spent 9.3 hours for extracurricular activities including physical activities. It is comparatively low in our study population compared to the American population.

Point prevalence of TV viewing while having meals was 86.3% and for TV viewing with breakfast, lunch and dinner were 9.4%, 23.6% and 83.1% respectively. There was no statistically significant association between placement of the TV and having meals while watching TV.

According to our research point prevalence of parental observation during TV viewing was 94.6%. Point prevalence for always and often parental observation during TV screening is 59%.

As our study mainly focused on assessing the patterns of usage of TV among the adolescent age group, we could not analyse the negative effects of TV viewing. Therefore, we recommend further studies to clarify the association between TV viewing time, physical activity, and the metabolic syndrome. The children who participated in this study were not representative of all children in Sri Lanka, despite high participation rates. Thus we recommend further cross sectional studies to cover majority of Sri Lankan adolescent population for better understanding of our findings. Furthermore, as parents are role models and the first teachers of their children, we recommend parental education to gain their attention on bad outcomes of media usage among children and how to prevent it with proper guidance. Although children spend more time on TV viewing than extracurricular activities, we could not assess the association between TV viewing and academic performance. We suggest further studies to assess the relationship of excessive television viewing with poor educational outcome as it is multifactorial.

### Conclusions

TV was the most prevalent screen media type (97%) among adolescents in the Anuradhapura Educational Zone and the median TV screening time of an average school student was 23.5 hours per week and 3 hours per weekend which is way above developed world standards for television screening. The content of TV screening was mainly tele-dramas and up to 59% content was under reasonable parental observation.

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