Television watching exposure from childhood to early adulthood

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1. Introduction

Television (TV) watching is a prevalent sedentary behaviour across the life span, often in addition to other screen based media. In spite of the accumulated data from studies showing the negative association of TV watching and health outcomes, specifically over developmental epochs such as early childhood, adolescence, entry into young adulthood and during later adult years, little is known about the longitudinal pattern of TV watching over these critical developmental periods (Thorp, Owen et al. 2011).

Some evidence suggests TV viewing appears to be a fairly stable behaviour over a number of years of sample follow up. However the handful of studies examining how TV viewing tracks throughout childhood and adolescence and into young adulthood have been varied in their analytical approach (Hancox, Milne et al. 2004, Biddle, Pearson et al. 2010, Francis, Stancel et al. 2011) and few studies have had more than 2 or 3 years of follow up in their assessments, and thus may have missed identifying longitudinal patterns which may occur over critical developmental periods.

The purpose of this study was to explore TV watching exposure at a group level over a period of 15 years across developmental epochs of childhood, adolescence and young adulthood.

2. Methods

Participants for this study were part of The Western Australian Pregnancy Cohort (Raine) Study of which the methodology has been described previously (Newnham, Evans et al. 1993). Briefly, 2900 pregnant women attending the public antenatal clinic at King Edward Memorial Hospital, or nearby private practices, were recruited into the Raine Study between May 1989 and November 1991. A total of 2868 children have undergone serial assessment at birth and at ages 1, 2, 3, 5, 8, 10, 14, 17 and 20 years.

At ages 5, 8 and 10, parents reported on the length of time their child spent watching TV per day. At ages 14, 17, and 20, study participants self-reported about the length of time they usually spent watching TV per day. TV watching exposure categories were defined as: i) no hrs/wk, ii) less than 7 hrs/wk, iii) between 7 and 14 hrs/wk, iv) between 14 and 21 hrs/wk and v) more than 21 hrs/wk.

3. Results

At each year of measurement, there were approximately equal numbers of males and females. Most participants watched between 7 and 14 hrs/wk of TV across all ages, except at age 14 where the majority of participants watched between 14 and 21 hrs/wk. Proportions of males and females within each TV watching category were similar at all ages, except as the participants transitioned from adolescence (age 17) to young adulthood (age 20), when females started to watch less TV than males (Table 1). Figure 1 illustrates the increasing proportion of participants with high exposure during the adolescent period.

Table 1. Proportion of participants within each TV watching categories over the 15 years of data collection.

<table>
<thead>
<tr>
<th>Hrs/wk</th>
<th>Age 5</th>
<th>Age 8</th>
<th>Age 10</th>
<th>Age 14</th>
<th>Age 17</th>
<th>Age 20</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>females (n=932)</td>
<td>males (n=928)</td>
<td>females (n=909)</td>
<td>males (n=877)</td>
<td>females (n=866)</td>
<td>males (n=850)</td>
</tr>
<tr>
<td>No TV</td>
<td>0.43%</td>
<td>0.48%</td>
<td>0.34%</td>
<td>0.45%</td>
<td>0.12%</td>
<td>0.06%</td>
</tr>
<tr>
<td>&lt;7</td>
<td>17.69%</td>
<td>17.74%</td>
<td>16.69%</td>
<td>18.20%</td>
<td>14.57%</td>
<td>14.16%</td>
</tr>
<tr>
<td>7-14</td>
<td>19.95%</td>
<td>19.03%</td>
<td>22.51%</td>
<td>19.99%</td>
<td>14.59%</td>
<td>20.57%</td>
</tr>
<tr>
<td>14-21</td>
<td>9.84%</td>
<td>10.70%</td>
<td>9.57%</td>
<td>8.45%</td>
<td>12.41%</td>
<td>11.83%</td>
</tr>
<tr>
<td>&gt;21</td>
<td>2.20%</td>
<td>1.94%</td>
<td>1.79%</td>
<td>2.02%</td>
<td>3.15%</td>
<td>2.91%</td>
</tr>
</tbody>
</table>
4. Discussion and Conclusion

Whilst TV watching appears relatively stable from childhood to young adulthood, there may be critical points which may be useful times to target interventions to reduce TV watching exposure. Further, group averages as presented here may mask important differences in individual trajectories. Many potentially unhealthy characteristics are established in early childhood and understanding the factors which may precipitate the increase in TV watching during early adolescence could be helpful in reducing this behaviour. Future research should use advanced statistical modelling techniques which allow for population heterogeneity and both within and between-person variation in TV watching to be characterised so as to better understand the longitudinal characteristics of TV watching.

Acknowledgements

We would like to thank the Raine Study participants and their families, the Raine Study research team, the National Health and Medical Research Council for specific project funding support (104480), and the University of Western Australia, Curtin University, Women’s and Infants Research Foundation, Telethon Kids Institute, the Raine Foundation and Edith Cowan University for cohort support. Straker was supported by a National Health and Medical Research Council senior research fellowship (1019980).

References


