

2006

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This document is the authors' final version of the published article.

Link to published article: <http://dx.doi.org/10.1108/07363760610655014>

Recommended Citation

Chan, Kara, and James U. McNeal. "Children and media in China: An urban-rural comparison study." *Journal of Consumer Marketing* 23.2 (2006): 77-86.

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**Children and media in China:
An urban-rural comparison study**

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Chan, K. and McNeal, J.U. (2006) Children and media in China: an urban rural comparison study, *Journal of Consumer Marketing*, 23(2), 79-88.

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Acknowledgement: The work described in this paper was fully supported by a Faculty Research Grant from the Hong Kong Baptist University (Project No. FRG/03-04/II-10)

Running head: *Media use*

**Children and mass media in China:
An urban-rural comparison study**

Keywords: China – Children – Consumer socialization – Media use

Abstract

Research paper

Purpose

The current study attempts to examine how media ownership, media usage and attention to advertising vary among urban and rural children in Mainland China and also to collect information about the contexts of media usage and time spent on various activities including media usage.

Design/methodology/approach

A survey of 1,977 urban and rural children ages six to thirteen in the four Chinese cities of Beijing, Guangzhou, Nanjing and Shanghai, and in the rural areas of the four provinces of Heilongjian, Hubei, Hunan, and Yunnan, was conducted in March 2003 to May 2004. Questionnaires were distributed through sixteen elementary schools and local researchers were selected and trained to administer the data collection.

Findings

Media ownership and media exposure were high for television, children's books, cassette players, VCD players and radios among both urban and rural samples. In general, media ownership, exposure and usage were higher among urban children

than that among rural children. However, television ownership and television exposure were slightly higher among rural children than among urban children. The urban-rural gap between media ownership and media exposure was more prominent for new media such as DVD and computer/internet. Chinese children had low to medium attention to advertising. Rural children reported a higher attention to television commercial than urban children while urban children reported a higher attention to other forms of advertising than rural children. Media usage by sex and by age group was also reported.

Research limitations/implications

Three of the four surveyed urban cities were highly advanced in terms of their economies and advertising development when compared with all other Chinese cities.

Practical implications

The study should serve as an advertising media planning guideline for marketers and advertisers in China. It can help marketers select the right type of media to reach a specific age-sex profile of urban and rural Chinese children.

Television, the Internet and children's print media can be good potential media for promotion to urban children. TV, children's books, cassette tapes, VCDs and radios can be good potential media for promotion to rural children.

Originality/value

This paper offers insights for designing media strategies to disseminate market information to urban as well as rural children in China.

(361 words)

Children and mass media in China: An urban-rural comparison study

Introduction

The functions of communication in a society are surveillance, consensus, and socialization (Lasswell, 1948). These communication tasks are carried out by different parties depending on the different levels of development of a society. Communication indicators have been used to provide measures of the development and usage of personal and mass media communication in a society. Communication indicators are defined as indexes of the state of production, distribution and reception of messages in a social system (Chan and Lee, 1992). Indicators of message production refer to the characteristics and encoding practices of media institutions and communication professionals. Indicators of the message distribution system pertain to the availability and capacity of communication channels. Reception indicators are the audience's consumption and evaluation of various forms of communication. Messages produced in the communication process constitute the symbolic system. It can also be analyzed in volume and orientation as communication indicators. The basic functions of communication indicators are to reflect the state of the situation, to serve as a feedback to a communication system and as basis for forecasting communication development and for planning social change (Chan and Lee, 1992).

There are at least two reasons to study communication indicators about children

and media in rural and urban China. First, social and economic reforms in transitional economies such as China have led to a substantial increase in consumer incomes and demand for products (Batra, 1997). The enormous population and rapid growth of consumption patterns in China have resulted in several market segments with distinctive profiles (Schmitt, 1999). Among these markets segments, China's children represent an important market because of their growing purchasing power and their enormous influence on family purchase decisions (McNeal and Yeh, 1997). While rapid commercialization of childhood as a result of economic restructuring, new affluence, and innovative retailing practices is not unique to China, its one-child policy and the rapid economic development have enabled the process to unfold at a fast pace and across all social strata (Davis and Sensenbrenner, 2000). Even families in remote parts of China experience television advertising as a new form of cultural authority in instilling the idea that consumption leads to a happy childhood (Jing, 2000). McNeal and Yeh (1997) found that in addition to their own purchases Chinese children influence around 68 percent of family purchases, surpassing the 45 percent for US children.

Second, there is a lack of study on media and their consumption among children in China. The only one reported for both rural and urban children was conducted in 1988 (Greenberg, Li, Ku and Wang, 1991). A later one reported for urban children only was conducted in 1999 (McNeal and Ji, 1999). We expect a drastic change in

availability and accessibility of media, in particular in Chinese cities, since then.

Because of differences in sample profiles (for example, age profiles) and types of questions asked, it is often difficult to conduct a direct comparison of media usage among rural and urban children in China with existing literature.

The current study attempts to compare rural and urban Chinese children's access to traditional and new media, how often they are exposed to various media, how much time is spent on media when compared with the time spent on other activities, and their attention to various forms of advertising. For comparison purposes, two questionnaires were developed for the rural and urban samples and were administered to children of identical profiles in terms of their school levels. Hypotheses were tested about media ownership, media usage and attention to advertising.

Literature review

Statistics of China

In 2004, the population of China was 1299.9 million (National Bureau of Statistics of China, 2005). The urban and rural population was 542.8 million (42%) and 757.1 million (58%) respectively. There were 279.5 million of children aged below 14 (21%).

In 2004, the per capita annual net income of rural households was 2,936 yuan. The per capita disposable income of urban households was 9,422 yuan. Urban household

income was over three times that of rural household income. The Engel coefficients (which refers to the proportion of expenditure on food to the total expenditure of households) were 47.2 percent for rural households and 37.7 percent for urban households (National Bureau of Statistics of China, 2005).

There were 282 radio broadcasting stations, 314 television stations and 60 educational television stations throughout China. Subscribers to cable television programs reached 114.7 million. Digital cable television service covered 30 cities in China with 1.22 million subscribers. Radio broadcasting coverage rate was 94.1 percent and television broadcasting coverage rate was 95.3 percent (National Bureau of Statistics of China, 2005).

Media and children's consumer socialization

The process of learning about products, their brands, and the retail outlets where they can be bought is called consumer socialization (Ward, 1974). Theory says that children learn consumer behavior patterns from parents first and foremost, but also from other socialization agents; namely, peers, schools, stores, media, and the products themselves and their packages (Moschis, 1987). Media's influence on children is mainly due to two dimensions—advertising and editorial/ programming content (O'Guinn and Shrum, 1997)—with advertising specifically intended to inform young consumers about products and encourage their purchase. (Product placement in TV

programs may have this intent, also, but it was not examined in this study.) Advertising media have probably received more attention in the research literature than any other consumer socialization agent (Moschis, 1987). Given that both advertising and editorial/program content of the mass media may provide children with knowledge and guidance in their consumer behavior development, it is often difficult to separate their influence. The amount of interaction with the media appears to be positively related to learning consumer behavior. That is, the more that children interact with the mass media, the more consumer socialization takes place (Moschis and Churchill, 1978).

Chinese children's media usage

In a survey in the early 1980s of 529 high school students in Hangzhou, the capital of Zhejiang Province, it was found that 88 percent of the urban and 11 percent of the rural students had television sets at home (Research Group on Adolescence and Television, 1984). Television was reported to be the most favored source of learning new information for children. Favorite television contents were drama among entertainment categories and sports among news topics. In a survey of 600 sixth grade and tenth grade students in Beijing in 1988 young people reported watching television 1.3 hours each day with the time spent on radio, newspapers, and audiotapes being 0.8, 0.7, and 0.6 hours per day, respectively (Greenberg et. al., 1991). In a survey of 2,288 Beijing children in 1998 the most popular media were television,

books and newspapers (Bu, 1998). Media exposure in a week consisted of watching television (89 percent), reading books (73 percent), reading newspapers (73 percent), listening to cassette tapes (65 percent), listening to radio (61 percent), reading magazines (53 percent), playing with computers (32 percent), playing electronic games (14 percent) and surfing on the Internet (7 percent). In a survey of 460 children in grades 4 to 6 in Beijing, television viewing (97 percent) was more common than newspaper reading (73 percent) and magazine reading (60 percent), and radio listening (39 percent) (McNeal and Ji, 1999). On average, children watched 17.2 hours of television a week. Time spent on television was far greater the total time spent on newspapers, magazines, and radios. Boys spent more time on television and magazines than girls.

In a survey of 1748 grade 1 to 6 children in three different Chinese cities, attention to television advertising was somewhat low with 29 percent of respondents saying they switch to other channels nearly every time (Chan and McNeal, 2002). Fifty-two percent of children reported that they watch television commercials sometimes. The percentages of 'watch often' and 'watch nearly every time' were both small. Drop in attention to commercials with age was reported for girls but not boys.

Hypotheses

Using the sparse research findings regarding Chinese children's media use and

the role of media in their consumer socialization, we hypothesized that:

H1: Household ownership of media will be higher among urban children than among rural children.

H2: The difference in household ownership of new media (such as DVD players and computers) between urban and rural children will be larger than the difference in household ownership of traditional media (such as radios and cassette players).

H3: Urban children will have a higher media exposure than rural children.

H4: Urban children will be exposed to more types of media than rural children.

H5: Urban children will spend more time on media activities than rural children.

H6: Urban children will attend to more to advertising than rural children.

Methodology

Participants and Procedures

The rural sample

Data from rural areas of China were collected March 2003 in the four provinces of Heilongjiang, Hubei, Hunan, and Yunnan. Researchers from a national Chinese market research company were hired to conduct the survey. Respondents were 1,012 grade 1 to 6 students ages 6 to 13 years. Questionnaires were administered in classroom settings in twelve elementary schools. The number of students in each school varied from 150 (in Heilongjiang) to 575 (in Yunnan). All the schools were situated in counties with population

of less than 131,000. Researchers read out the questions and possible answers for grades 1 to 2 students while older students in grade 3 to 6 filled in the questionnaires by themselves. All aspects of the research procedure were conducted in Chinese (Mandarin). There were nearly equal numbers of boys and girls. The mean age of the respondents was 10.0 years (SD=1.9 years). Of the respondents, 42 percent of the respondents were single children in their families. Boys were significantly more likely to be an only child than girls (Chi-square = 28.6, $p < 0.001$). Four questionnaires were invalid because of incomplete answers and the response rate was 99.6 percent.

The urban sample

Data for the urban sample were collected November 2003 to May 2004 in the four major cities of Beijing, Guangzhou, Nanjing and Shanghai. Respondents were 965 grade 1 to 6 students ages 6 to 13 years. Questionnaires were administered in the same manner as the rural sample. There were nearly equal numbers of boys and girls. The mean age of the respondents was 9.3 years (SD=2.0 years). Eighty-two percent of the respondents were only children in their families. There was no relationship between sex and whether the respondent was a single-child (Chi-square= 1.4, $p = 0.1$). Eight questionnaires were invalid as over half of the questions were not answered giving a response rate of 99 percent. In both surveys, respondents took about fifteen to twenty minutes to complete the questionnaires.

The questionnaires

A draft questionnaire in Chinese was constructed for the rural and urban surveys based on previous studies (McNeal and Ji, 1999; Bu, 2001). The questionnaire was tested and revised. The questionnaire consisted of close-ended questions about household ownership of broadcast and print media, media exposure, and amount of time children spent on various activities, children's attention to advertising, and four demographic questions.

Household ownership of broadcast and print media was measured by asking "Do you have the following items in your home now?" It consisted of twelve different household and media items. For each item, children were asked to choose from the answers "Yes" or "No" only.

Media exposure was measured by the question "In the past month, have you done any of the following things?" This question consisted of twelve items including interacting with broadcast media and print media.

Amount of time rural children spent on various activities was measured by asking children "On average, how much time do you spend on the following activities every day?" Children were requested to select from 5 answers, "0 minute", "1 to 60 minutes", "61 to 120 minutes", "121 to 180 minutes", and "180 minutes or above".

The rural and the urban questionnaires differed only in one respect. For the urban

sample, we asked children how much time was spent on “extra-curriculum activities”.

For the rural sample, we asked children how much time was spent on “agricultural work”.

Attention to advertising was measured by the question “In the past month, how often do you attend to the following types of advertisements?” using a five-point scale (1 = never watched, 5 = watch nearly every time). Respondents could choose ‘don’t know’.

Data analysis

Household ownership of media, media exposure, time spent on media and other activities, and attention to different forms of advertising were analyzed by urban and rural residence. Chi-square tests and F-tests were conducted to examine the similarities and differences among the two samples. All hypotheses were tested.

Household media ownership, children’s media exposure and attention to different forms of advertising were further analyzed by gender and by age group to investigate whether children’s media and advertising consumption are different for different demographic groups. Again, Chi-square tests and F-tests were conducted.

Findings

Urban and rural differences in media and advertising consumption

Household ownership of media is shown in Table 1 and Figure 1. Television

was the most common media among the urban as well as the rural samples.

Of all the respondents surveyed, 97 percent had television sets at home. The percentages of children with television set at home for the urban and rural samples were almost the same: 96 percent and 98 percent respectively. Black and white television sets were rare in urban children's home while they were still common in rural children's homes. Other than television sets, urban children owned significantly more media than rural children.

For the household ownership of print media, the urban sample had a higher percentage of ownership than the rural sample. The most popular print medium owned by urban as well as rural child was children's books. Over 90 percent of urban children and over 70 percent rural children possessed children's books at home. All the broadcast and print media had statistically significant F values. Ownership for media was higher among urban children than that among rural children except for television. As a result, H1 was partially supported.

New media, such as DVD players and computers, recorded the largest gap in ownership between the rural and urban samples. The differences in household ownership of DVD players and computers between urban and rural households were 50 percent and 60 percent respectively. The differences in household ownership of radios and cassette players between urban and rural households were 31 percent and

33 percent respectively. We used F-statistics to test the difference in ownership between DVD players and cassette players among the two samples and found it significant at the 0.001 level ($F=37.6$, $df=1$). So, the difference in household ownership of new media between urban and rural children was larger than the difference in household ownership of traditional media. Therefore, H2 was supported.

[Table 1 about here]

[Figure 1 about here]

Media exposure in the past month among urban and rural Chinese children is summarized in Table 2. Similar to media ownership, media exposure was highest for television. Nearly all respondents in both rural and urban samples watched television in the past month. Media exposure was the second highest for children's books.

Media exposure for cassette tapes, VCDs, radio, children's newspapers and magazines ranged from 50 percent to 60 percent. Media exposure for all other media was below 35 percent. Media exposure was lowest for the Internet.

Media exposure of urban and rural children differed significantly. Television exposure was higher among rural children than among urban children. Similar to media ownership, media exposure of urban children was higher than media exposure of rural children for all media except television. Again, the largest gap for media exposure was reported for the Internet and DVDs. Therefore, H3 was partially

supported.

To test H4, we counted the total number of media children were exposed to in the past month. On average, urban children were exposed to 7.1(SD =2.6) and rural children were exposed to 5.0 different media (SD =2.3). The F-statistics was 348.8, indicating that the difference in the mean values was significant at the 0.001 level.

Therefore H4 was supported.

[Table 2 about here]

The media exposure data also showed the context of media exposure (i.e. whether media exposure was taken place at home, out of home, or both). The results are summarized in Table 3 and indicate that children were exposed to media mainly in the home setting. Urban and rural children watched television at home and at other places. For urban children, the two media with highest ‘out-of-home only’ exposure were radio (31 percent) and electronic games (17 percent). For rural children, ‘out-of-home’ media exposure was in general higher than that of urban children. ‘Out-of-home only’ media exposures were highest for video tapes (64 percent), DVDs (63 percent), as well as the Internet (62 percent). This indicates that rural children were exposed to new media mainly in places outside the home. When we compared household media ownership and exposure figures, we found that they were of similar order of magnitude. One interesting finding was that for urban children; media

exposure figures were usually smaller than household ownership figures. The reverse was true for rural children. This suggests that urban children owned the media at home but some of them did not use them. Rural children were just the opposite. They did not own the media at home, but they used the media elsewhere.

[Table 3 about here]

The time urban and rural children spent with media and other activities on an average day is shown in Table 4. Both rural and urban children both spent most of their time playing with friends, doing homework/study, doing housework, reading books and watching television. Sixty percent of the rural respondents did not spend any time on agricultural work. One quarter of the urban respondents spent one to two hours daily on extra-curriculum activities. The urban sample was comprised of a higher proportion of children who did not watch television on an average day. In general, urban children spent more time on homework and media related activities (except television) than rural children. Rural children spent more time watching television as well as playing with friends. As a result, H5 was partially supported.

[Table 4 about here]

Table 5 summarizes urban and rural children's attention to different forms of advertising. Results indicate that all children sometimes watched television commercials. Attention to all other forms of advertising was low. Similar to media

exposure, attention to television commercials was higher among rural children than urban children. Attention to all other forms of advertising was higher among urban children than rural children. Therefore, H6 was partially supported.

[Table 5 about here]

Gender and age differences in media and advertising consumption

Household media ownership was similar for boys and girls (see Table 2). Boys were more likely to have electronic game players, radios, cassette players and computers at homes. Girls were more likely to have children's newspapers at home. Household ownerships of new media such as DVD players did not show significant differences among girls and boys.

Household media ownership showed significant differences among children of different age groups (see Table 2). Differences among age groups were more prominent than differences between genders. Older children were more likely to have a television set, cassette player, VCD player, radio, and all print media. Younger children were more likely to have a DVD player.

Media exposure in the past month showed significant differences among children of different age groups (see Table 3). Differences among age groups were more prominent than differences between boys and girls. Television was the only medium that had no gender or age differences in media exposure. All other media had either

significant differences in media exposure by gender, or by age group, or both. Girls had higher exposure in all three types of print media than boys. Boys had higher exposure in six out of nine broadcast media than girls. The gender differences in media exposure were most profound for electronic games (45% for boys vs. 22% for girls) and the Internet (25% for boys vs. 17% for girls).

Watching movies at cinemas dropped steadily with increasing age. Other than movies, older children in general were more likely to use broadcast as well as print media. Age difference was found more prevalent among print media than among broadcast media.

On average, boys were exposed to 6.2 different media (SD =2.7) and girls exposed to 5.8 different media (SD =2.6). The F-statistic was 12.9, indicating that the difference in the mean values was significant at the 0.001 level. Boys were exposed to more different types of media than girls.

The number of media used in the past weeks for respondents in age groups 6-7, 8-9, 10-11, and 12-13 were 5.9, 5.4, 6.5 and 6.1 respectively. The F-statistics was 20.0, indicating that the difference in the mean values was significant at the 0.001 level.

Duncan pair-wise tests of mean indicated that respondents aged 10-11 were exposed to the largest number of media while respondents aged 8-9 were exposed to the smallest number of media in a week. There was no significant difference between

the numbers of media used between respondents aged 6-7 and respondents aged 12-13.

Boys and girls reported similar level of attention to advertising (see Table 6). However, boys reported a higher level of attention to billboard ads than girls. Attention to advertising differed significant among respondents of different age groups. In general, children's attention to television commercials decreased with age. Children's attention to all other forms of advertising increased with age. With increase in age, children changed from seldom or never watched ads to seldom watched ads.

Discussion

Previous studies have established the importance of television among urban Chinese children in providing marketing information as well as entertainment. The current study demonstrates further the importance of television among rural Chinese children. Rural children, our research shows, have slightly higher household ownership of television, higher past month television exposure and spend a longer time viewing television than urban dwellers. So, television is certainly an essential socializing agent among rural as well as urban children in China.

Content analysis of a popular children's drama series shown on CCTV indicated that children's program contents focus mainly on consumption experiences

in urban China (Xia, Chan and Chan, 2004). This implies that rural Chinese children are exposed frequently to consumer images and experiences that may be very different from their own. It would be interesting to see what would be the impact of these images on rural children. For example, do rural children perceive the urban images seen on television as real? Are they attracted by the abundant goods and services available on television programs and commercials? Further research on rural children will provide some answers to these questions.

As noted, this research suggests that the impact of television in urban China is very important, but we believe not as significant as that in rural China. Our study indicates that urban children have access to a large variety of print and visual media, while rural children have access only to a limited choice of media. Thus, it would appear that television is particularly influential in the life of rural Chinese children.

When we compared the findings of the current study with Bu's (1998) study of Beijing children, we unknowingly revealed the development of media in China. For urban children, media exposure to television, cassette tapes, radio, books and magazines has remained at about the same levels. However, media exposure to electronic games and internet has increased significantly. Media exposure to new forms of visual media such as VCDs and DVDs among urban children was even higher than traditional media such as movies. For rural children, media exposure to

most of the media was still lower than that of urban children reported in 1998 with the only exception being for electronic games. This result is consistent with a recent study on urban-rural comparison of adult consumers that rural consumers were less innovative. They were less likely to buy trendy products (Sun and Wu, 2004). Thus, the diffusion of media has been much slower in the rural areas.

The current study also demonstrates urban-rural gaps in media ownership and usage. It found that there is a gap in media exposure among boys and girls. Girls consume mainly television and print media while boys consume mainly television and other broadcast media. Boys' interest in a visual culture is demonstrated through the greater exposure to screen-based media. These results are similar to those of a survey of British and Dutch children (Van der Voorte et al., 1998) in which the gender gap was profound for new media. Our data indicate that Chinese girls are more deprived of new media. This may be a function of parents' attitudes toward different media for boys and girls that permit boys to try other new media.

We found that television was the major source of information and entertainment for all children with household ownership and media exposure to television being extremely high for both rural and urban households. However, urban and rural children differ in the variety of media owned and used. The major difference lies mainly in the choices they make. In urban societies children own a wide variety of

media and use each of them more often. In rural societies children own a smaller variety of media and use each less often. We therefore expect that there will be a substantial gap in the knowledge of urban and rural children that cannot be remedied by just frequent television viewing.

Similar to Chan and McNeal's (2004) study of urban children's attention to television commercials, the current study reports medium to low attention to all forms of advertising among urban as well as rural children. There is no way to predict the effects of this action on the children themselves. For example, does it limit their knowledge of the marketplace and its elements which would probably please many parents and policy makers? If this is the case we might also speculate that it would limit children's product choices, which does not seem to be a good result for them, and certainly not for marketers. The study results show that there is an increase in attention to advertising in general with age suggesting interest in market information among older children who are making more product choices and purchase decisions than the younger ones.

Managerial implications

The current study provides insights for marketers and advertisers to select the appropriate media to reach urban as well as rural Chinese children. Television is obviously the best national medium to reach children in China. It is owned by virtually all

households in rural and urban China and viewed often by the children in them. Other than television, marketers and advertisers may consider advertising in children's print media including children's books, magazines and newspapers. Currently, children's print media carry very little advertising. A quick browse of sixteen titles of newspapers and magazines for children and adolescents purchased in Beijing and Shanghai in 2004 indicated that most of these print vehicles carry no advertising at all. When these print media carry advertising, very often it is geared toward adults and parents. For example, an issue in "Stories" magazine published by Shanghai Literature and Art Publishing House carried three full pages of advertisements consisting of one for a gold necklace, another for investment in a franchised restaurant, and the other for wine distillery equipment. Perhaps this is due to poor advertising media planning in China.

Marketers and advertisers should identify the type of editorial and programming environments that are most appealing to their target audiences. For example, toys for boys might place their advertisements near scientific fiction segments and toys for girls might place their advertisements near drama series. Advertisers can also work with children's print media to create product-related editorials or develop stories around the use of the products or product categories. For example, the renowned electrical appliance manufacturer, Haier, has created the Haier twins and developed television programs and video tapes of adventurous stories around them to build up its brand image.

Our study also provides insight for marketers and advertisers to select the right marketing communication channels for children of different demographic profiles. Boys are more likely to consume broadcast media while girls are more likely to consume print media. As there is no media education in China, the advertising industry should work with media owners to introduce basic consumer education to equip children with consumer skills such as understanding the purposes of advertising and its role in consumer behavior.

(4700 words)

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Table 1. Household ownership of broadcast and print media

	Total	Urban	Rural	F value	Boys	Girls	Chi-square	6-7	8-9	10-11	11-12	Chi-square
	N=1,977	N=965	N=1,012		N=971	N=970		N=313	N=585	N=619	N=427	
<i>Broadcast media</i>	(%)	(%)	(%)		(%)	(%)		(%)	(%)	(%)	(%)	
BW or Color TV	97	96	98	13.1***	97	97	0.9	92	96	99	100	45.8***
Color TV	83	93	75	119.5***	83	83	0.0	77	80	88	86	25.9***
BW TV	28	11	44	295.2***	31	25	6.7*	25	28	25	34	10.9*
Cassette player	62	79	46	266.0***	63	61	1.1	61	58	64	66	8.9*
VCD player	59	75	45	193.8***	59	59	0.1	60	55	64	58	9.2*
Radio	58	74	43	220.1***	62	54	12.8***	55	53	62	62	14.0**
Computer	36	66	6	1269.6***	38	33	5.0*	40	33	41	28	24.3***
Electronic game player	34	42	27	50.5***	45	23	97.0***	35	32	36	33	2.1
Video cassette recorder	33	46	20	161.8***	34	31	2.3	34	31	36	29	7.4
DVD player	32	58	8	788.3***	33	31	0.8	42	28	36	25	33.9***
<i>Print Media</i>												
Children's books	81	93	71	166.7***	80	83	3.7	73	71	90	90	103.4***
Children's newspapers	53	68	39	184.8***	49	57	14.7***	48	48	56	59	20.1***
Children's magazines	50	71	30	391.1***	48	52	2.1	38	43	55	61	54.3***

* p<0.05, ** p<0.01, *** p<0.001

Table 2. Media exposure in the past month

	Total	Urban	Rural	Chi-square	Boys	Girls	Chi-square	6-7	8-9	10-11	12-13	Chi-square
<i>Broadcast media</i>	(%)	(%)	(%)		(%)	(%)		(%)	(%)	(%)	(%)	
TV	97	95	99	23.7***	97	96	1.7	95	97	98	97	5.0
Cassette tapes	60	71	50	92.1***	61	59	0.7	64	55	60	63	9.1*
VCD	58	61	56	6.9***	62	55	8.9**	60	52	61	62	14.3**
Radio	57	65	50	43.9***	61	53	12.8***	57	52	63	56	17.2***
Video tapes	35	38	32	8.5***	37	33	3.9*	32	30	42	32	20.7***
Electronic games	34	37	30	10.4***	45	22	110.4***	35	31	39	29	13.4**
DVD	32	52	14	311.6***	34	30	4.0*	39	27	38	27	28.0***
Movies	30	42	18	137.9***	31	28	2.2	46	28	30	18	69.7***
Internet	21	40	3	405.3***	25	17	18.1***	23	13	25	22	28.1***
<i>Print Media</i>												
Children's books	80	88	73	76.3***	78	82	5.4*	73	72	88	87	72.1***
Children's newspapers	53	63	44	71.0***	49	57	14.2***	46	45	58	60	35.4***
Children's magazines	50	67	33	217.8***	47	52	4.2*	39	42	55	60	54.6***

* p<0.05, ** p<0.01, *** p<0.001

Table 3. Context of media exposure in the past month

		Media exposure	No. of children	Home only	Other place only	Both	Chi-square
		(%)		(%)	(%)	(%)	
<i>Broadcast media</i>							
TV	Urban	95	904	59	2	39	0.2
	Rural	99	995	60	2	38	
Cassette tapes	Urban	71	665	77	8	15	223.2***
	Rural	50	501	45	45	10	
VCD player	Urban	61	581	78	6	16	158.9***
	Rural	56	560	55	36	9	
Radio	Urban	65	617	50	31	19	44.3***
	Rural	50	504	39	50	11	
Video Tapes	Urban	38	357	74	11	15	206.4***
	Rural	32	319	31	64	5	
Electronic games	Urban	37	351	61	17	22	51.6***
	Rural	30	305	48	41	11	
DVD player	Urban	52	481	74	8	18	202.8***
	Rural	14	142	31	63	6	
Internet	Urban	40	377	66	15	19	39.1***
	Rural	3	29	35	62	3	
<i>Print Media</i>							
Children's books	Urban	88	845	75	4	21	26.4***
	Rural	73	733	74	10	16	
Children's newspapers	Urban	63	591	76	5	19	78.6***
	Rural	44	439	70	21	9	
Children's magazines	Urban	67	634	75	7	17	51.7***
	Rural	33	337	65	23	12	

*** p<0.001

Table 4. Amount of time spent daily on media and other activities (in minutes)
(%)

Activities	0	1-60	61-120	121-180	181 or above	Chi-square
Agricultural work						n.a.
- urban	n.a.	n.a.	n.a.	n.a.	n.a.	
- rural	59	25	10	4	2	
Extra-curriculum activities						n.a.
- urban	18	39	24	8	11	
- rural	n.a.	n.a.	n.a.	n.a.	n.a.	
Homework/study						114.2***
- urban	5	47	28	11	9	
- rural	1	64	28	5	2	
Housework						65.9***
- urban	21	65	9	2	3	
- rural	10	78	10	1	1	
Playing with friends						193.1***
- urban	22	43	18	9	8	
- rural	3	55	29	9	5	
Media						
Books						208.5***
- urban	9	55	23	7	6	
- rural	31	54	12	2	1	
Electronic games						76.1***
- urban	63	24	5	3	5	
- rural	77	19	4	1	0	
Internet						370.6***
- urban	63	25	7	3	3	
- rural	97	2	1	0	0	
TV						105.4***
- urban	12	57	17	7	6	
- rural	3	70	20	5	2	
Newspapers/magazines						198.5***
- urban	28	54	12	3	3	
- rural	56	38	4	1	0	
Videotapes						40.8***
- urban	66	23	8	2	2	
- rural	78	15	6	1	0	

*** p<0.001

n.a. = not applicable

Table 5. Attention to advertising

	Mean@	S.D.	Urban	Rural	F value	Boys	Girls	F-value	6-7	8-9	10-11	12-13	F-value
TV commercials	3.0	1.2	2.9	3.1	13.8***	3.1	3.0	1.0	3.1	3.0	3.1	2.9	2.7*
Newspaper ads	1.9	1.4	2.2	1.6	104.5***	1.9	1.9	0.0	1.7	1.6	2.2	2.1	23.1***
Ads on vehicles	1.9	1.4	2.4	1.4	291.2***	1.9	1.8	3.1	1.9	1.5	2.1	2.0	15.9***
Magazine ads	1.7	1.4	2.1	1.3	177.5***	1.7	1.6	1.4	1.3	1.4	1.9	1.9	21.9***
Billboard ads	1.6	1.4	1.9	1.4	90.8***	1.7	1.5	12.1***	1.5	1.3	1.9	1.8	25.5***
Radio commercials	1.5	1.2	1.7	1.4	16.7***	1.6	1.5	1.8	1.5	1.4	1.7	1.6	6.5***

@ Measured on a 5-point scale (1 = never watched, 5 = watched almost every time)

* p<0.05, ** p<0.01, *** p<0.001

Figure 1. Household ownership of broadcast and print media

