



Impact of mass media and socio demographic factors on physical exercises and food habits among adolescents in Pokhara sub metropolitan municipality, Nepal

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Abstract

Background: Maintenance of physical health is essential during adolescence. Media have an impact on physical exercises and food habits among adolescents.

Objectives: To determine the influence of mass media and socio demographic factors on physical activities and personal get ups and food habits among adolescents in Pokhara Sub Metropolitan Municipality, Nepal.

Materials and Methods: A cross sectional study was carried out in January-March 2015 among 302 adolescents of 8 higher secondary schools in Pokhara Sub Metropolitan Municipality, Nepal using self administered questionnaire technique. Data was collected and analyzed using SPSS version 21.

Results: Mass media increased the adolescents' involvement in physical activity while nearly half (49%) skipped outdoor activities to use mass media. Most of the adolescents (82.4%) bought food products advertised in mass media. All of adolescents were taking junk foods with half taking sometimes a week. Snacks/noodles were preferred by large number of adolescents (41.1%). Sex ($p=0.001$) and monthly family ($p=0.0028$) were significantly associated with involvement in physical exercise. Having television in bedroom ($p=0.016$) was a contributory factor for avoiding outdoor activities. Diet preference was significantly associated with monthly family income ($p=0.024$).

Conclusion: Mass media and socio demographic factors were found to have impact on physical activity and food habit. Governments and concerned regulatory agencies should control the mass media from advertising the junk foods that affects the health.

Keywords: adolescents; junk food; mass media; socio demographic factors

Introduction

Adolescence is the crucial transitional period in human lifecycle from ages 10-19 years that is characterized by growth and changes^[1]. It is important and risky phase in physical and mental development. Maintenance of physical health and fitness is of great importance. Regular performance of physical activities, yoga, meditation, intake of nutritious food helps in maintaining physical health and thereby overall health of adolescents.

Nepal is undergoing the phase of economic transition and rapid urbanization. Use of mass media is at rising rapidly not only in Nepal but throughout the globe. Mass media has both positive and negative impact on physical health of adolescents. Media is widely used by adolescents that have huge effects on their health. Dieting or starving for obtaining body image like their favorite personalities and skipping outdoor activities for TV may cause health problems such as obesity and other nutritional deficiencies^[2-4]. Many adolescents skip physical activities and exercises to view television programs and use internet and consume huge quantity of food^[5-7]. Intake of junk foods like cold drinks, chocolates, noodles/snacks, biscuits and chips which is usually rich in fats and poor in other nutrients is on escalating level⁸. Absence of regular physical activity might cause overweight/obesity thereby leading to a number of chronic diseases like diabetes, cardiovascular diseases and cancer⁹.

¹⁰. A subsequent proportion of adolescents undergo haphazard vigorous exercises which is too not good for their health. A regular physical exercise and healthy diet are necessary for remaining healthy and energetic^[11, 12].

The study was carried out to determine the influence of mass media on physical activities and personal get ups and food habits and to find out the association between involvements in physical exercise and food habits with socio demographic factors among adolescents in Pokhara Sub Metropolitan Municipality, Nepal.

Materials and Methods

The study conducted was cross sectional. It was carried out among 302 adolescents studying at different higher secondary schools in Pokhara Sub Metropolitan Municipality, Nepal using structured questionnaire. Data collection was done from January to March, 2015 using self-administered questionnaire technique. Initially 10 schools were randomly selected from total of 69 higher secondary schools in Pokhara Sub Metropolitan Municipality in such a way that 4 were public and six were private by using proportionate sampling and half of schools were science related and half management. From each selected school only a class was selected using simple random sampling technique. Only the adolescents available at the school premises were included in the study. The students

above the age of 19 years and those who denied participating in the study were excluded. Collected data were entered and analyzed using SPSS version 21. Chi square test was used to find out the association between involvements in physical exercise and dietary habit with socio demographic factors. Approval for study was taken from the Institutional Review Board of Eternal University. Informed consent was taken from school administration as well as from the students. Privacy of the information was maintained and used for the research purpose only.

Results

Basic Background

Nearly two third, of the students 58.6% were from Science stream and remaining 41.4% were from Management streams. Around 60% of the respondents were male and about 40% were female. Majority (73.5%) were from nuclear family and 26.5% from joint family.

Influence of mass media on physical activities and personal get ups

Sports and meditation program was being watched by most of the adolescents (87.4%). More than two third, 68.5% had learnt some sort of sports/exercise by watching TV/YouTube. Yoga was practiced by only 44% of the respondents. Out of 133 respondents who practiced Yoga, 16.5% practiced it daily, 39.1% practiced sometimes a week, 22.6% practiced sometimes a month and 21.8% practiced it whenever they get the chance to do. Nearly half of the adolescents used to skip outdoor activities to use various types of mass media and 35.4% had recently changed their dressing style and personal get-ups inspired from favorite TV actors and sport personalities. About 38% had recently changed their hair-style inspired from their media personalities. The main purpose of doing regular exercise/gym was to maintain body fitness as stated by 72.5% of the respondents. 18.5% did exercise in order to lose weight and 8.9% to gain weight. (Table 1)

Table 1: Influence of mass media on physical activities and personal get-ups

Characteristics	Frequency	Percentage
Personal Behavior*		
Watch sports/meditation programs on TV/YouTube	264	87.4
Learnt sports/exercise by watching TV/YouTube	207	68.5
Practice of Yoga by watching TV	133	44.0
Ever skipped outdoor activities to use mass media	148	49.0
Recently changed dressing style and get-ups inspired from favorite TV actors or sport personalities	107	35.4
Recently changed hair-style inspired from favorite TV actors or sport personalities	115	38.1
Purpose of doing exercise/gym		
Gain weight	27	9.0
Lose weight	56	18.5
Maintain fitness	219	72.5

*Multiple responses

Influence of mass media on food habits of adolescents

Most of the adolescents (82.4%) bought the food products as advertised on the mass media. More than three-fourth, 77.5% had the habit of eating while watching TV/computer. More than one-fifth, 28.5% used to skip meals in order to become slim as their media personalities. And only 42.1% used to notice advertisements of food products on mass media. Noodles/snacks such as Chowmein, *Wai Wai*, MoMo and other fast foods were among the frequently used junk foods used by 41.1% of the respondents followed by chocolates (23.2%), cold drinks (15.9%), chips/*kurkure* (11.9%) and biscuits (7.9%). Exactly half of the respondents used junk

food sometimes a week followed by 28.1% using it daily, 17.9% sometimes a month and 4% once a week. Of the total 302 respondents, 77.2% were non-vegetarians and 22.8% were vegetarians. Mass media was responsible for change in dietary habits of the respondents. 39.4% of the respondents have increased their non-vegetarian diet whereas 28.8% have decreased their non-vegetarian diet intake. 68.5% of the respondents have increased the intake of fruits and vegetables and 51.3% increased their daily fortified food consumption patterns as influenced from mass media awareness information. (Table 2)

Table 2: Mass media’s influence on food habits

Media influence on food habits	Frequency	Percentage
Food Habits		
Buying food products as advertised on mass media	249	82.4
Eat food while watching TV/computer	234	77.5
Skip meals to become slim as influenced by media personality	86	28.5
Notice advertisements of food products on mass media	127	42.1
Frequently used junk foods		
Chocolates	70	23.2
Cold drinks	48	15.9
Noodles/Snacks	124	41.1
Biscuits	24	7.9
Chips	36	11.9

Frequency of junk food intake		
Daily	85	28.1
Sometimes a week	151	50.0
Once a week	12	4.0
Sometimes a month	54	17.9
Food preference		
Vegetarian	233	77.2
Non-vegetarian	69	22.8
Change in dietary habits due to mass media exposure		
Increase in non-vegetarian diet	119	39.4
Decrease in non-vegetarian diet	87	28.8
Increase in fruits and vegetables intake	207	68.5
Increase intake of fortified foods	155	51.3

*Multiple responses

Association between involvements in physical exercise and food habit with socio demographic factors

Involvement in physical exercise was found to have significant association with the sex of the students ($\chi^2=12.426, p \leq 0.01$) and monthly family income ($\chi^2=9.071, p \leq 0.05$) but there was no statistical association between faculty

($\chi^2=2.042, p \geq 0.05$) and type of family ($\chi^2=0.265, p \geq 0.05$) with involvement in physical exercise. (Table 3) There was statistical significant association between the presences of TV in personal bedroom of the respondents with avoiding of outdoor activities ($p=0.016$). (Table 4)

Table 3: Association between involvements in physical exercise with socio demographic factors

Socio-demographic factors	Involvement in physical exercise		Chi-square(χ^2)	p-value
	Yes	No		
Faculty			2.04	0.167
Management	80(64.0)	45(36.0)		
Science	127(71.8)	50(28.2)		
Family			0.27	0.67
Nuclear	154(69.4)	68(30.6)		
Joint	53(66.2)	27(33.8)		
Sex			12.43	0.001*
Male	136(76.4)	42(23.6)		
Female	71(57.3)	53(42.7)		
Monthly family income			9.07	0.0028*
<NRs. 20,000	72(75.0)	24(25.0)		
NRs. 20,000-NRs. 40,000	66(35.1)	42(38.9)		
NRs. 40,000-NRs. 60,000	34(61.8)	21(38.2)		
>NRs.40,000	35(81.4)	8(18.6)		

#Figures in parentheses represent percentage

*statistically significant at $p < 0.05$

Table 4: Association between presence of TV in bedroom and avoiding of outdoor activities

Presence of TV in bedroom	Avoiding outdoor activities		Chi-square(χ^2)	p-value
	Yes	No		
Yes	63(58.3)	45(41.7)	5.85	0.016*
No	85(43.8)	109(51.2)		

#Figures in parentheses represent percentage

*statistically significant at $p < 0.05$

A significant association was found between monthly family income ($\chi^2=9.412, p \leq 0.05$) with the type of diet the students prefer. But there was no statistical effect of faculty ($\chi^2=1.668,$

$p \geq 0.05$) and gender ($\chi^2=0.253, p \geq 0.05$) of the students on their food choice. (Table 5)

Table 5: Association between types of diet preferred and socio demographic factors

Socio-demographic factors	Type of diet preferred		Chi-square(χ^2)	p-value
	Junk foods	Home cooked		
Faculty			1.67	0.223
Management	39(31.2)	86(68.8)		
Science	68(38.4)	109(61.6)		
Sex			0.25	0.627

Male	61(34.3)	117(65.7)		
Female	46(37.1)	78(62.9)		
Monthly family income				
<NRs. 20,000	28(29.1)	68(70.3)	9.41	0.024*
NRs. 20,000-NRs. 40,000	37(34.3)	71(65.7)		
NRs. 40,000-NRs. 60,000	29(52.7)	26(47.3)		
>NRs.40,000	13(30.2)	30(69.8)		

#Figures in parentheses represent percentage

*statistically significant at $p < 0.05$

Discussion

Mass media plays both positive and negative role in the adolescent's health. More than two-fifth of adolescents (44%) regularly practiced yoga/physical activities watching TV/YouTube. More than two-thirds (68.5%) learnt sports and other physical activities from TV and YouTube. The findings are similar to the study conducted in Oman which found 43% regularly practice physical activities and 66% had learnt sports and physical activities from watching in mass media without the help of trainer or coach [13]. The sports and yoga programs are growing very popular among the adolescents and youth groups. As a result, adolescents and youth are more engaging themselves in doing these sorts of exercises. Regular performance of yoga and physical exercises is beneficial. 35.4% of the adolescents had recently changed their dressing style and get-ups as influenced from their favorite media personalities and 38% changed their hairstyle. The findings of this study are slightly less than a study in India that reported 41.9% of students recently changed their hairstyle and 48.9% changed their dressing style recently [14]. Changing of dressing and hair styles helps to develop attractive personality but however it mightn't be easily acceptable by Nepalese society as it could be against the social and cultural values and norms. Fast foods and snacks including biscuits, chips and *kurkure* were preferred by large number of adolescents (60.9%) followed by chocolates by 23.2% respondents and soft drinks by 15.9% of the respondents. The result is slightly higher than findings of study in Sudan where 53% of students preferred fast food, followed by 23% of individuals who liked snacks, 15% consumed soft drinks and the remaining 7% preferred taking candies [15]. The reason behind the high usage of fast foods might be that the target group of the study is adolescents who are more and easily attracted towards fast foods and candies as compared to other age group population. Exactly half of the students used junk food sometimes a week, followed by 28.1% using it daily, 17.9% sometimes a month, 4% once a week. The result from study in Sudan reported 20% of the students used junk foods for more than five times per week, only 11% percentage of students opted for four times per week, 28% for thrice, 25.2% for twice and 14% for once in a week [15]. A study in Saudi Arabia reported that about 25% of Saudi adolescents consumed fast foods more than three times per week, whereas 6% of them ate fast foods on a daily basis [16]. Another study in Saudi Arabia reported that about 75% of students consumed fast foods 12 times weekly [17]. Excessive TV viewing is associated with childhood obesity and exposure to advertisements increases demand for specific foods, food purchasing and food consumption [18]. A study in England found that the mechanism of effect of media exposure on obesity may also function through the advertising

messages for unhealthy foods targeted at children and adolescents [19]. These facts were proved by the findings in the study that 82.5% of the respondents bought food products based on the advertisements on mass media.

Students enrolled in science were slightly more involved in physical exercises. They might have studied about the consequences of not performing physical activities like overweight/obesity and other health problems. Significantly males were found involved in physical activities than females. Females might be bonded within house works and males are free to perform physical exercises and involve in sports like cricket, football in Nepalese patriarchal society. Average monthly income of the family was also found significant associated with involvement in physical activity. Presence of television in bedroom was significantly associated with avoiding physical activities. Adolescents might had watched television program and television serials and make themselves but those not having television might had gone for sports or games in the leisure time. The study found comparatively females preferred more junk foods than the males. This is supported by a study done in 2004 [20]. As females in Nepalese society are mostly limited into the house and restricted to go for sports, they might have had watched television and took fast foods while watching. Moreover, females are usually fond of chocolates and noodles. Junk food intake was significantly associated with average monthly income of the family. Comparatively adolescents with higher family income were found taking junk foods. They might had sedentary lifestyle and go for easily available foods and drinks like noodles, snacks, cold drinks and biscuits.

Conclusion

Mass media and socio demographic factors were found to have impact on physical activity and food habit. On one hand, mass media promoted physical activity and healthy food habits among adolescents. On the other hand, it promoted avoiding physical activity and unhealthy food habits like junk foods. Sex and monthly family income were significantly associated with involvement in physical activity and only monthly family income was found associated with diet preference. Governments and concerned regulatory agencies should control the mass media from advertising the junk foods that affects the health. Parents and society should promote physical activity and healthy food habits among the adolescents.

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