IMPACT OF ELECTRONIC MEDIA ON CHILD HEALTH

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ABSTRACT

Electronic media has significant impact on a child’s health and development. It affects their behaviour, cognitive and social skills, nutritional and physical development. The impact can bring either negative or positive effect. Along with the current technological enhancement it poses a huge risk and health related burden among the children. As such, it warrants for the society in general to be fully aware of its implication and further empower the children to cope with this uncertain circumstances. Therefore, the main objective of this article is to discuss about those impact and its relations with child’s health.

Keywords: Electronic media, children, health effect

1.0 Introduction

Electronic media has significant impact on a child’s health. It affects their behaviour, cognitive and social skills, nutritional and physical development. More profoundly the undesirable effect which includes aggressive behaviour, risky sexual behaviour, social isolation, tobacco and alcohol abuse, poor academic performances, obesity and eating disorder were widely studied and has been compelling and undisputed. Meantime, the electronic media do have its fair share of positive effect. Particularly on children’s cognitive abilities, vocabulary development, creative thinking, better IQ, long-term memory strengthening and improved in verbal and conceptual skills.

In the United States (US), over 80% of adolescents own at least one form of new media technology (Lenhart et al., 2007). A National Kaiser Family Foundation (US) survey found that children aged 8 to 18 years had an average media usage time of 6 hours and 21 minutes daily (Kaiser Family Foundation Study 2009). Total media exposure time for most of the children exceeded the time spent in all other activities.
2.0 Behavioural Impact

2.1 Violence and Psychology

There is a significant connection between the media violence and real life aggression behaviour. Television programs and electronic games featuring violence and destruction strongly influence the children behaviour. Hoff et al., (2008) showed that the more frequent children view horror and violent films or play violent electronic games, the higher the probability of these children involved in violence and delinquency at later age. According to Bandura & Ross, (1963) children watching violent television programmes imitate aggressive model when the model was rewarded or no consequences to the model were depicted. However, children did not imitate the aggression when the model was punished.

Primack et al., (2009) showed that excessive television viewing in adolescence was a risk factor for developing depression among young adulthood. Yama et al., (2001) described that frequent and regular exposure to murder-mystery movies and stories filled with violence and torture causes them to suffer fears, tensions, bad dreams, development of suicidal ideation and such incidents being widely reported in many parts of the world.

2.2 Sexual

Risky sexual behaviour is another negative impact of electronic media on a child’s health. Teenager’s television programs have more sexual content than adult oriented programs yet fewer than 14% of shows mentioned risks and responsibility of sexual activity (Kaiser Family Foundation, 2009). They further stressed that besides television, most of the children, particularly adolescents browse through internet and have free access to pornography. These exposures can lead to early initiation of sexual intercourse, engagement of multiple sexual partners, sexual related violence, unwanted pregnancy and sexually transmitted infections. In the US, approximately 47% of high school students have had sexual intercourse. Of them, 7.4% reported having sex before the age of 13 and 14% have had 4 sexual partners or more (Grunbaum et al., 2004). In another view, Peterson et al., (1991) found that co-viewing television and discussing television with parents were related to decrease sexual initiation in certain adolescents. Indeed the impact of media on sexual behaviour is clearly evident and delicate parenting skills were necessary in guiding youngsters out of high risk behaviours.

Social networking sites also used by some adolescents to display sexual references which were associated with their intention to have sex. One national survey of “sexting” with cell phones, conducted among 13 to 19 year olds, revealed that 20% had sent and 48% had received sexual messages (National Campaign Prevent Teen Unplanned Pregnancy, 2009). However, social networking sites can also be used pro-socially for safer sex campaigns. Evidence shows that giving teenagers’ access to condoms does not lead to earlier sexual activity (Brown & Strasburger, 2007). The positive outcome of this practice of early distribution of condom is still vague but due surge of current sexual practice of teenagers, advertising in media for such campaign proves fruitful.

2.3 Substance Use

Due to lower level of maturity children especially the adolescents were prone to risk taking behaviours. Due to their high curiosity level and incomplete development of their frontal lobe
of their brain, curbing such negative act is tough (American Academic of Pediatrics, 1999). Frequent exposure to programs glamorizing smoking, alcohol drinking and movie idols indulging in substance abuse sends the dangerous message to children that dangerous substance use is normal and attractive (American Academic of Pediatrics, 1999).

Research had demonstrated a strong association between exposure to certain mass media messages and smoking in adolescents. Total of 70% of movies made in the United States contained smoking scene and was rarely associated with negative health outcomes in the movie (Dalton et al., 2003). Longitudinal prospective studies have revealed that exposure to smoking in movie at baseline (grades 5–8) predicts smoking initiation 1 to 8 years later (Dalton et al., 2003, Dalton et al., 2009).

It has been shown that exposure to alcohol advertising and television program were associated with positive beliefs about alcohol consumption. In a study, 56% of students in grades 5 to 12 said that alcohol advertising encourages them to drink (Grube & Waiters, 2005). In another study, exposure to music was strongly associated with marijuana use while movie exposure was related to alcohol consumption (Primack et al., 2008). To make matter worse, recent studies of social networking sites found children spent nearly one fourth of their time in substance abuse in reference to 40% of their profiles (Moreno et al., 2009, Moreno et al., 2009). Nevertheless, it is the responsibility of multiple stakeholders in ensuring the correct message being shown on the electronic media.

3.0 Social Impact

3.1 School Performance and Learning Disabilities

A study showed that exposure to general television programming in early childhood were associated with inferior academic skills at school. The children in the study who were regular viewers of mainstream television had smaller vocabularies and less developed mathematic skills compared to children who viewed no television or viewed children’s educational programs only (Wright, 2001). Numerous studies have shown an impact on academic performance of children (Hancox et al., 2005, Zimmerman & Christakis, 2005), especially if there is a television set in the child’s or teenager’s bedroom. The possibility of a connection between television-viewing and Attention Deficit Disorder (ADD) or other learning disabilities were currently an issue of great controversy (Christa et al., 2004). Data from the National Longitudinal Survey of Youth indicated that television viewing at age one to three was associated with parental reports of attention disorder symptoms at age seven. Attention disorder symptoms were indicated by parent response to the five item hyperactivity subscale of the Behavioral Problems Index (BPI), which assessed concentration, impulsivity, and restlessness. (Christa et al., 2004).

Children were prone to be addicted to certain television programs which attracted them the most. As an example, Sesame Street viewing was found to be beneficial to children’s vocabulary development. A two-year longitudinal study followed two cohorts of children (160 of three to five year olds and 166 of five to seven year olds). They found out that children who spent more time viewing Sesame Street achieved higher scores on a picture test of vocabulary, regardless of parental education, family size, gender, and parental attitudes.
This relationship was stronger for the three to five year old cohort than for the five to seven year old cohort (Rice et al., 1990). Research in another television program showed children who regularly watched *Blue’s Clues*, a curriculum-based interactive program for preschoolers in USA, scored higher on standardized measures of problem solving and flexible thinking than children who did not watch *Blue’s Clues*, even though both groups of children had scored equivalently on a pre-test prior to *Blue’s Clues* exposure (Anderson et al., 2000). Viewing other educational programs like *Dora the Explorer*, *Dragontales*, *Arthur*, and *Clifford*, between six and 30 months of age was associated with accelerated language growth.

Unfortunately, overall television viewing including adult programs was associated with reduced vocabulary (Linebarger & Walker, in press). Educational television viewing at two and three years of age predicted school readiness among low to moderate income children (Wright et al., 2001). The content of each program is important to be known. Especially parents, monitoring what they watch will eventually produce positive results. Besides positive impact on TV viewing, usage of computer proves beneficial. According to Haugland, (1992), it showed that children who used computer with the developmentally appropriate software had improved intelligence test scores, non-verbal skills, dexterity, and long term memory. When supplemental activities were provided, children also improved in verbal and conceptual skills. Unfortunately, creativity was reduced among the children who used non-developmentally appropriate software.

### 3.2 Television viewing and social isolation

Bickham et al., (2006) investigated the relationship between television viewing time, content, context, and peer integration. As children spent more total time watching television, they spent a significantly shorter amount of time with family and friends as compared to those who don’t. Thus, viewing television causes poor peer relationships and thereby increased the risk for social isolation, anxiety disorder, agoraphobia, and antisocial behaviour which includes aggression and gang involvement. While television may isolate children, the reversed causal direction is also plausible where lonely children may turn to television for entertainment and companionship. Children who were marginalized by their peers used television to escape the stresses of their lives and to meet their social needs (Kubey, 1996). Conversely, children who were socially integrated spent less time watching television (Krosnick, Anand, & Hartl 2003). Television viewing with friends may provide a venue for communication skills to develop and violent program viewing may influence younger children to be more antisocial (Livingstone & Lemish, 2001).

### 3.3 Pro-social Effects

Despite the negative effects, the media can powerfully instil pro-social and educational values among children. Children and teenagers can learn anti-violence attitudes, empathy, and tolerance toward people of other races and ethnicities, and respect for their elders (Strasburger 2009). Video games can be beneficial as well, including improving compliance with chemotherapy regimens in adolescents with cancer (Kato et al., 2008).

Important and useful public messages can be successfully embedded into primetime television shows that were popular with adolescents. Television programs such as ‘Friends’ and ‘Gray’s Anatomy’ was found effective in educating adolescents on condom usage, HIV and pregnancy (Collins et al., 2003). Research into the impact of digital media on relationship
formation and maintenance had revealed that on line communication and on line self-disclosure can stimulate adolescents social connectedness and, thereby their wellbeing. The positive effect was when adolescents talk with their existing friends otherwise gives negative effect when used to communicate with strangers (Valkenberg 2009).

4.0 Nutritional Impact

4.1 Obesity and Eating Disorders

For the past 26 years, numerous longitudinal studies have shown that media use is the contributing factor to the current epidemic of obesity worldwide (Jordan, Kramer, & Strasburger 2008). As an example, randomized controlled experiments had provided evidence that exposure to junk food advertising had an impact on children’s food beliefs and preferences (Robinson et al., 2007). Children with an average of four years old preferred specific foods which were advertised on video more than children who had not seen the foods advertised on video (Borzekowski & Robinson, 2001).

The Internet now presents a new concern. As the Kaiser Foundation noted, there is a vast amount of food related content online, with the potential to significantly expand and deepened children’s exposure to food marketing messages (Moore 2006). Apart from the influence of advertising, eating while viewing may lead to greater food consumption. College-aged students showed significantly greater consumption of food when subjects were watching television versus listening to classical music (Blass et al., 2006) which predisposes them to overweight and obesity. The investigators hypothesized that satiety cues were suppressed in viewing conditions. Although the evidence that television viewing displaces physical activity is equivocal, researchers were now examining whether heavy media use, particularly at night time, displaces sleep. Children who do not get enough sleep were more likely to engage in sedentary behaviours such as television viewing and less likely to engage in physical activity which give rise to obesity (Zimmerman 2008).

The media play a crucial role in the formation of body self-image and may be responsible for creating unrealistic expectations and body dissatisfaction. A natural field experiment in Fiji revealed that the prevalence of eating disorders increased dramatically after the introduction of American television programs, which show excessively thin female lead characters (Becker 2002). It is indeed a great challenge but as society continues to idolize smaller and thinner physical appearance, such issues were difficult to curb. Besides watching television programs, the impact of video games is immense. According to Stettler et al., 2007, it showed a significant association between electronic game use and obesity, with nearly two fold increased risk of obesity for every hour spent playing electronic games daily. An inverse relationship between time spent using video games and daily physical activity had also been observed among the children. Similarly, children who had television sets in their bedrooms watched more television and were more likely to be obese (Dennison, Erb & Jenkins, 2002). Therefore, the mechanism of effect of television and video game exposure on being overweight were undoubtedly multifactorial.
5.0 Conclusion

There were huge arguments from the authority as well as policy makers regarding children in relation to the electronic media. It is because they are unable to distinguish between genuine and questionable messages sent by the media. In order to handle these mixed messages, they must be taught to be responsible media consumers (McClug 1987). They had the ability since they were critically aware of what they see, hear, and read. In view of this learning opportunities, usually the children will analyse and critique messages and determine how they could be said better or differently. By introducing media education, it will gives groups of children as well as parents and teachers the opportunity to work together toward a common goal by achieving a message that has been delivered by the electronic media to achieve better health (McClug 1987).

By teaching the individuals, they must explain about responsibility, cooperation, and problem-solving. No matter what they do, they will always encounter situations that require these skills. Providing a mechanism or steps to guide them in identify their strengths and weaknesses, develop varied interest and accept new challenges and directed to the active elements or contents of the message from electronic media (Zimmerman 2005). Through media, children can learn to evaluate critically the health messages that were contained in various media outlets. Once they can realize how the media package messages, they will be more aware of what to look for and how to interpret what they see and hear. Any health-related messages will be scrutinized and judged critically. Under such scrutiny, it make the students to be more aware of their health and encourage them to avoid unhealthy behavior (Zimmerman 2005).

The recent widespread use of electronic is an encouragement. However, the negative impact on children can never be denied. Strict controlled viewing is mandatory. However, the production and broadcasting of media programs were still outside the jurisdiction of the parents. The primary lead in such circumstances are the stakeholders from relevant ministries, especially Ministry of Communications. They must play a major role being an advisor major playmaker in ensuring the right media content which is culturally and socially acceptable being aired to the society. Other stakeholders can play their part by propagating the right messages to the young minds.

Excessive unsupervised exposure to mass media poses our children in more danger to their general wellbeing. News related to violence among adolescents is wide spread and tends to worsened if awareness were not being effectively delivered to the society. The media has a disturbing potential to negatively affect children’s healthy development, including weight status, sexual initiation, aggressive feelings and beliefs, consumerism and social isolation. The ultimate goal is to reach children with positive messaging. Embracing media rather than trying to counteract it promises to be an effective tool in shaping the behaviour of children and adolescents.
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Declaration

Author(s) declare that all works are original and this manuscript has not been published in any other journals.

Authors’ contribution

Author 1: Idea conceptualizing, literature review, drafting the final manuscript, publication
Author 2: Idea conceptualizing, literature review
Author 3: Idea conceptualizing, literature review
Author 4: Advised during manuscript preparation, reviewing the final draft
Author 5: Reviewing the final draft

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