

Mothers' Perception Regarding the Influence of Interactive Media on Children's Cognitive, Social, Moral Development in Pakistan

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Abstract

The purpose of this research is to investigate the effects of interactive media on children's cognitive, social and moral development according to their mothers' perception regarding these influences in Pakistani society. The proposed research work examines influence on three levels, i.e. cognitive, social and moral domain. The researcher undertakes to find out how excessive usage of social media influences children's development and what are the developmental differences between mild users and moderate to severe users of social networking media. The major hypothesis of the study is the greater the exposure to interactive social media, greater the impact on children's cognitive, social and moral development". The study captured mothers' perception of the influence of interactive media on children development through survey using questionnaire as a tool of data collection. 120 respondents (mothers) (60 mothers of mild users, and 60 mothers of heavy users of social networking sites) were accessed for the current research from metropolitan cities of Pakistan. The statistical t-test was used for testing the hypothesis and differences in means were examined. The results and findings revealed that heavy users of social media tend to incorporate more developmental changes in terms of social, cognitive and moral domains in contrast to light users.

Keywords: Interactive social media; Cognitive development; Moral development; Social development; Mild usage of social networking sites; Chronic usage of social networking sites

Introduction

Interactive social media is rapidly growing with immense pace and many studies have reported the cognitive, social and moral impact of this new media on children's behavior. Interactive social media refers to all the digital media where user has the option to respond. In the present study the researcher includes educational and recreational games, internet, social networking websites, smart phone interactive tools etc. Defining what is right or wrong is a result of expectations of their social environment and of what benefits their environment. Parents' fears of the negative impact of these new technology especially video games on children are the impetus for the current research. Since the 2000 report, both large and small scale studies have been published on children's in-home use of interactive media. These studies indicated that ownership of computer-based media has continued to grow. Between 1999 and 2000, computer ownership in American households had grown 2% (from 68%-70%), whereas ownership of video game systems remained relatively stable, with a 1% growth (from 67% to 68%). Online access saw the most significant increase from 1999 to 2000: household dissemination grew 11%, from 41% in 1999 to 52% in 2000. Almost no academic research has emerged on children's use of interactive appliances such as handheld games, interactive toys, and wireless technologies.

To explain how social networks can influence cognitive, moral cognition and behavior it is important to form a picture of what a social network in this study constitutes of. For this study the network definition of Foster et al. [1] was adopted whose basic supposition of a network is 'a set of actors connected by a set of ties'. The actors in this

study are individuals in adolescent and early teen's groups, connected by advice giving and friendship ties. Both ties are valued (measured on a scale, in amount of advice giving and strength of friendship) [1]. Gibbons also showed that both types of ties play an important role in changing professional values. Use of Internet, Cable, video and movies have become popular culture in youth, and are well-liked sources of information and entertainment, and favorite leisure activities. The growing popularity and use of these media sources are raising questions about how media can promote social, cognitive developments. Interactive media technology became basic necessity of every individual's life in modern times. In 1990s the world was dominated by the media channels like Television and computer, but nowadays the trend has progressed some steps ahead. This modern arena is now surrounded greatly by the social media channels like internet websites, iPods, android cell phone, virtual social networks, computer 3D games and online stores. It is argued that media offer entertainment part and informal curriculum about social behavior that is taught through the social content of entertainment in media, and students are as expected to learn this as they are to learn the formal curricula in their educational institutes. Student's learning about the social world depicted in media is affected by what media transmit. They make ideas and are most likely to learn when they are actively engaged with external objects such as programmable bricks, computer programs, videogames, and movies. In these modern times, we must know that the values and beliefs we practice, our suppositions lead us to certain decisions, our education and experiences, or what we know for a truth or reality. Considering the power of this tool we ought to know how it works.

A recent study on the effects of video games has reported the positive educational and social benefits of interactive media. Children who use computers show superior spoken communication and cooperation, can play better within a set of rules, share leadership

roles, take turns, and initiate interactions. Williams [2] reported that interactive media can also be the cause of decline in academic achievement. Adigwe reported that few studies may suggest that video games are negatively linked with achievement whereas computers and Internet are positively linked with achievement. Anderson, writing with reference to learning from Web-based courses, emphasized the importance of considering characteristics of both learners and the technology that predicts successful Web-based learning and it is important to know how children are interacting with these media and what they are learning from them in order to ascertain whether these experiences are cognitively enriching [3].

The concept of media socialization, which examines specifically how different kinds of media influence children's cognitive and social growth, is a perspective which has emerged over the last fifteen years as a key framework for understanding how and what children take from their experiences with communication. It is grounded in classic thinking about the nature of language socialization, the nature of education and learning, mind, self, and society, cognitive development, social cognitive development and dialogue [4]. Following Scribner and Cole we believe that such a framework can be generalized to understand the role of any communications medium in learning. Wartella [3], and Anderson [5] reported that there is a link between the use of interactive media for cognitive skill development and academic achievement, with the content as the most prevailing factor to both social and cognitive development. Cognitive development of children aging 8 to 16 years refer to strengthen their capacity for remembering, imagining, logical reasoning, problem solving, and critical thinking. Social development of children can be measured by a wide range of social interactions that children possess without adult help and to establish relationships that are not extensions of their parents' networks. Children tend to form stronger, more complex relationships, particularly with peers of the same sex, and grow in their desire to be liked and accepted by friends. Researchers have found there is a correlation between the hours spends on interactive media and its gruesome effect on children is terrifying [6-12]. According to the cultivation theory of mass media, there is a difference regarding the effects of media with reference to heavy users and light users. The study is designed to explore the perception of mothers' regarding the impacts of digital media usage on the development of children in Lahore, Pakistan through a survey of 200 respondents using convenient sampling technique. The objectives of this study are:

- To evaluate the effects of interactive media in cognitive, moral and social development of children.
- To analyze the differences between children who are using technology and others who are not using.
- To evaluate the role of interactive media in character building of children.
- To purpose directions for parents and teachers regarding the usage of technology.

Hypotheses

The designed hypotheses for the present research by the researcher were the followings:

H1: Usage of interactive media is like to be related to social, moral and cognitive development of children.

H₁¹: Significant differences are likely to be observed among heavy and light users of interactive media.

H2: Mothers indulging into social networking sites are likely to predict favorable attitude about children's social, moral and cognitive development of their children.

H3: Demographics are likely to predict the changes on the impact social networking usage of adolescents and early teens.

Theoretical Framework

Uses and gratification theory

Katz et al. synthesized that UGT's approach was focused on "the social and psychological origins of needs, which generate expectations of the mass media or other sources, which lead to differential patterns of media exposure (or engagement in other activities), resulting in need gratifications and other consequences, perhaps mostly unintended ones." Keeping in view the "interactive social media technology usage and its impact on child development" the "Uses and gratification Theory" is quite appropriate to gage technology use in society. So for this study researcher will chose assumptions of this theory. In the present research the audience is active and they are goal directed as the uses and gratification theory assumes them. The core assumptions of this theory is that people use media to gratify certain needs and the researcher wants to know that how usage of interactive media is ratifying their needs [12-16].

Cultivation theory

The purpose of this study is to draw a connection between social media use and cultivation effects on cognitive, social and moral development of heavy users through cultivation theory. Gerbner [6] stated, "We have found that the amount of exposure to television is an important indicator of the strength of its contributions to the ways of thinking and acting".

Initially this theory was developed to check cultivation effects of TV, but now with passage of time technology is rapidly changing and interactive social media is getting much popular instead of traditional media i.e. TV and Newspaper. Yet no significant work is done in this regard to check the cultivation role of interactive media i.e. Facebook, twitter. In this regard the researcher wants to check whether this theory holds same significant position for new interactive media for sake of cultivating new things and concepts. The researcher also want to check that is there any difference of cultivation effects in terms of time spent on social media i.e. "heavy users" and "light Users". In the present study researcher is also concerned with the amount of time spent in using interactive technology to gage its impact on adolescents. It is suggested that the more time an individual spends in the media world, then the more likely that individual is going to report having social realities that are congruent with the social realities faced on social media.

Social cognitive theory

This theory is a very meaningful framework to evaluate learning of media and social media. It is derived from social learning perspective, and sees the individual learning and behavior changing through observational learning and vicarious reinforcement socially, which bridges the boundary between macro-level and micro-level by giving us a new way of understating the relationships between media and its audiences. Recent research explaining Internet usage has both extended and challenged the uses and gratifications approach to

understanding media attendance by discovering 'new' gratifications and introducing powerful new explanatory variables. The present research integrates these developments into a theory of media attendance within the framework of Bandura's Social Cognitive Theory [17-21].

Methodology

The current research purported to investigate the mothers' perspective of the influence of social networking use on cognitive, moral and social development of children. Cross sectional survey research design was adopted.

Sampling strategy

Purposive sampling technique is used. This study targets the students age ranging from 5 to 10 years. The survey method is used to collect the data. Questionnaires were filled from parents whose children are heavy users and light users or not using social media. The population of this study was Lahore city. The survey questionnaires were filled by the mothers of heavy users and mild users from different schools i.e. The Educator School, The Trust School and Garrison School System. The sampling frame of this study was student's attendance list. This sample was selected keeping in view the demographic needs, social media usage and rationale of study.

The questionnaire was developed after conducting a pilot study. Different variables for cognitive, social and moral development were selected after reviewing relevant literature. The reliability of questionnaire was measured by using Cronbach's Alpha reliability test. The reliability for this test questionnaire was 8.7.

Ethical considerations

Researcher has undertaken ethical considerations while conducting this research. Students and parents both were informed about the research and results. This research was conducted after permission of school management, students and parents. All the results are truly and properly incorporated.

Procedure

These schools were selected according to the convenience of the researcher. With the cooperation of management of the mentioned

schools 150 questionnaires were distributed among the parents and then 120 questionnaires were used to keep a balance in the ratio of mild users and heavy users.

Operational Definition

Interactive media: Facebook, interactive games.

Cognitive development: Exposure and adoption related to thinking ability, learning skills, memory, decision making, cognition, attention.

Moral development: Exposure and adoption related to moral values, societal ethics, and religious values.

Social development: Social interactions and relations with family, friends, peers, society.

Mild usage of social networking sites: using the interactive social media for less than four hours per day.

Chronic usage of social networking sites: using the interactive social media for more than four hours per day.

Statistical analyses

All the data gathered from questionnaires was put into SPSS software. Independent sample t-test is used to draw a comparison between the social, moral and cognitive development of mild users and heavy users [22,23].

Results

The finding of the data generate through SPSS are discussed below:

H1: Usage of interactive media is like to be related to social, moral and cognitive development of children.

H₁¹: Significant differences are likely to be observed among heavy and light users of interactive media.

The results are generated from the data retrieved from mothers regarding cognitive, social and moral development of children. The below data shows the mean differences of heavy and light users in terms of development. This data is presented in the form of Table 1 below.

Variables Internet Usage	Light Users (n=60)		Heavy users (n=60)		t	p	95% CI		Cohen' s d
	M	SD	M	SD			LL	UL	
Cognitive Development	29.33	9.166	44.2	3.658	11.66	0.01	17.39	12.34	2.13
Moral development	17.57	5.457	29.78	5.44	12.28	0.01	14.18	10.24	2.13
Social development	28.98	10.33	46.73	3.57	13.21	0.01	21.44	15.86	2.67
	74.98	19.88	120.72	7.49	16.69	0.01	51.16	40.3	3.04

Note: CI: Confidence Interval; LL: Lower Limit; UL: Upper Limit M: Mean; SD: Standard

Table 1: Mean differences in heavy users and light users of social media on cognitive, social and moral development.

H2: Mothers indulging into social networking sites are likely to predict favorable attitude about children's social, moral and cognitive development of their children.

The results generated from data of mothers' internet connectivity and SNS usage revealed that they tend to predict a favorable attitude regarding interactive media usage and its positive effects on children's

cognitive, social and moral development of children in comparison to those who are non-users. Since H2 is proved significant because the value of p is .04, that mothers indulging into social networking sites are likely to predict a little more favorable attitude about children's social,

moral and cognitive development of their children. The below Table 2 presents the statistical presentation of facts using the independent sample t-test. The value of Cohen's d is calculated manually using the formula: mean difference/SD.

Variables Internet Usage	Non Users (n=60)		Internet users (n=60)		t	p	95% CI		Cohen' s d
	M	SD	M	SD			LL	UL	
Mother Internet Usage	92.69	27.614	102.68	26.532	2.021	.04	19.77	.190	.368

Table 2: Mothers indulging into social networking sites are likely to predict favorable attitude about children's social, moral and cognitive development of their children.

H3: Demographics are likely to predict the changes on impact of social networking usage of adolescents and early teens.

Since H4 is proved significant because the value of p is (.000). The below Tables 3-5 presents the statistical presentation of facts using the independent sample t-test. The value of Cohen's d is calculated manually using the formula: mean difference/SD.

The results generated from data of shows that demographics like income, child gender and mother's age have also impact on the child cognitive, moral and social development along with internet usage.

Variables Income	Middle income (n=60)		High income (n=60)		t	p	95% CI		Cohen' s d
	M	SD	M	SD			LL	UL	
Child Development	82.50	27.32	106.94	23.03	5.124	.000	33.71	15.17	.967

Table 3: Effect of income group on child cognitive, social and moral development.

Variables Mother Age	Below 30 years (n=102)		31 to 40 year (n=18)		t	p	95% CI		Cohen' s d
	M	SD	M	SD			LL	UL	
Child development	103.82	25.01	64	10.65	8.276	.000	27.93	51.71	.867

Table 4: Effect of mothers' age on child cognitive, social and moral development.

Variables Child gender	Male (n=58)		Female (n=62)		t	p	95% CI		Cohen' s d
	M	SD	M	SD			LL	UL	
Child development	84-38	25.01	110.45	23.38	5.901	.000	34.82	17.30	1.077

Table 5: Effect of child gender on child cognitive, social and moral development.

Discussion

The present research confirms the cultivation effects of interactive media usage on heavy users in comparison to light users. Significant differences are seen in the cognitive, social and moral development of children who use internet more than 4 hours per day. Along with internet usage other demographic variables like mothers' age, income group, mothers' internet usage and child gender also effect the child development. The data shows that internet usage has significant impact on children cognitive skills i.e. cognition, decision making, difference between right and wrong, communication skills. Heavy users of internet have greater number of virtual contacts but they are getting lonely in their real lives as their face to face communication with family and friends is lessening day by day. Due to internet usage political interest is increasing and habit of sharing things is developing among children. They are getting familiarity with social their norms, and their mannerism is getting better as they tend to present things in

a better way. A negative impact of heavy internet usage is seen in the form of sexual exploitation and they are forgetting the concepts of religion, as they spend most of their time on internet and SNS instead of indulging in other religious and routine activities.

After all, Internet is a technology and tool at people's disposal. People necessitate using it frequently at work or for personal communication. According to the results of this study internet it is not a problem, problem occurs when people use it in a wrong way. Internet could turn into a socially isolating tool if people utilize it to avoid face to face contact with social capital and to escape from the real world real world relations and activities.

Justifications and likely benefits

Technology is growing with a rapid pace in Pakistan. Usage of Interactive media is becoming a compulsory part of education and

schools. Tabs, Interactive mobile applications, social media is getting very popular among adolescents. Children are the most sensitive periods. This period hold a key position in individual's personality development and shaping up of beliefs. This study will help technology creators, school ownerships and parents to gage the impacts of technology on cognitive, social, moral and personality development. It will help Pakistani educational administration to bring about great changes in their setups according to the insight from findings of the current study. It will also add to the theoretical body of knowledge. This study will examine the role of interactive social media regarding cultivation which has been previously checked in case of television only.

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