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Modeling Social Harms of Adolescents in Virtual Social Networks

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Abstract: The current research was conducted with the aim of identifying and presenting a control model of social harms of teenagers in the use of virtual social networks. The research method was of a mixed method type, which was operationalized and implemented in two qualitative and quantitative parts. The research method in the descriptive quantitative phase was a survey type and the statistical population included all specialists in the field of communication and modern communication media who were selected to participate in the research. The data collection tool in the quantitative part was a researcher-made questionnaire taken from the qualitative phase. The data were analyzed in the quantitative phase using the software package for social sciences and Smart PLS. The findings of the research showed that the convergent and discriminant validity indicators indicate the desirability of the validity of the variables and the values of Cronbach's alpha coefficient and composite reliability indicated the accuracy of measuring the dimensions of all the variables. The estimated values (factor loading, critical values and significance level) indicated that the factor loadings related to the dimensions and items of all variables are in a favorable condition. In fact, the correlation of the variables with the dimensions and items related to these dimensions was high, so the convergent validity related to the dimensions of the variables at the level of the items is established. According to the results, the research model included the dimensions of mental and emotional injuries, weakening of social values, violation of sexual norms, moral injuries and changing behavioral patterns. The findings provide useful implications in the control and prevention of cyberspace harms.

Keywords: Virtual social networks, social control, social harms, adolescents, social communication

Introduction

Virtual social networks are bases or a set of bases that provide facilities so that users can share their interests, thoughts and activities with others and others can share these thoughts and activities with them (Farnicka, 2017). The emergence and development of virtual social networks, which generally happened in the last decade, has caused great changes in human societies and has changed many social, cultural, economic and political structures. Naturally, such transformations and changes have created new social, personal, moral and cultural issues that did not exist in the era before the emergence and development of virtual social networks (Theghatoleslami, 2011).

The use of virtual social networks, especially in the case of teenagers who generally do not have much media literacy, can have unfortunate consequences. Teenagers generally entered these virtual social networks and started using them emotionally and without considering the rational notions of media consumption. It is certain adolescents, have not yet achieved a clear understanding and experience of the type of relationships and communications that exist in this space, and they do not feel the contradictions in a real way (Lai & Kwan, 2017).

The problem becomes more prominent when the target community is teenagers who basically do not know much about social networks and the Internet (Akram & Kumar, 2017) and their media literacy is very weak. For this reason, teenagers have a great capacity for social vulnerability and may experience various injuries at any moment (Kelleci & Inal, 2010). They do not have much experience in this field, and for this reason, the social harms experienced by them may be accumulated, and finally we will face a detailed set of social harms in teenagers due to the use of the Internet (Liu et al., 2016).

On the other hand, more up-to-date and more skill of teenagers has made them a pioneer in using new media capabilities ((Cobley & Schulz, 2013). Among teenagers, virtual social networks are their main communication method to maintain friendly, family and academic relationships and partnerships (Heiberger & Harper, 2008). Based on this, more damage will definitely be done to this group of people in the society. So that excessive use of the Internet and staying in these virtual networks is considered an addiction, which can lead to severe psychological and social harm (Smahel et al., 2012). Facing teenagers with moral-social maturity makes them more exposed to premature puberty (due to watching inappropriate content for the age range), and identity crisis (due to unfamiliarity with communication and moral skills) (Bryant & Oliver, 2009). This problem is so much that some social theorists refer to it as internet addiction (Young, 2004).

Accordingly, teenagers are influenced by this environment. In fact, virtual space is also one of the surrounding environments of teenagers that teenagers are involved with (Bryant & Oliver, 2009). This issue has been different in the traditional and pre-metaphorical situation. In this situation, teenagers were most influenced by family, school and friends and their socialization process was done by these social groups, but today and in the era of virtual social networks, these network spaces are responsible for the socialization of teenagers, and due to the cultural, social, religious, moral, etc. differences that exist in these networks, teenagers may enter paths contrary to the cultural paths of Iranian society. Besides that, the experience of freedom without control in virtual social networks by teenagers has exposed them to all kinds of social and cultural harms. In any case, the social environment around teenagers plays a significant role in their lives (Li et al., 2011) and now with the changes that have occurred due to the emergence and expansion of virtual social networks, this social environment has changed, which causes numerous injuries and social issues have occurred in Iranian teenagers.

These social harms include many things that can be called fraud and internet crimes, internet pornography, virtual love and emotional conflict of teenagers with virtual illusions, violence and aggression and its generalization to the real world (Kırcaburun et al., 2019). Anyway, these social harms are not only limited to teenagers and the space of virtual social networks, but involve the whole society. Such damages may become widespread to the extent that they question the benefits of virtual space and virtual social networks. Therefore, it is important to recognize these social harms and provide solutions for the proper use of these virtual social networks, and the results can provide a suitable platform for better use of these networks and reduce concerns about it. Based on this, the current research seeks to investigate the social harms caused by the presence of teenagers in virtual social networks in different areas, and to provide solutions to control these social harms. Teenagers are of fundamental importance

because they are the generation that shaped the future of the country and the development of society in all areas depends on them. Beside this importance, there are behavioral patterns and cultural and social values of the Iranian society, questioning them and systematically weakening these patterns can lead to unfortunate consequences. Adolescents may have less stability in maintaining social values and behavioral patterns of Iranian society due to emotional and irrational conflicts with various issues. It is clear that questioning and deconstructing these behavioral and value patterns by teenagers has endangered their future social personality and may endanger the Iranian society in the future. This issue does not mean that values and behavioral patterns do not change, rather these values and patterns may change over time, but they have a fixed and specific core around which the changes revolve. Questioning this core, without logical alternatives, in line with Iranian culture can have unfortunate consequences for Iranian society.

Many researches have been conducted on the way teenagers use the Internet and virtual social networks and its positive and negative consequences, but not much study has been done on the methods of controlling the consequences of these virtual social networks for teenagers.

In the context of media influences, Katz et al. (1973), developed the uses and gratifications theory, and concluded that audience satisfaction can come from three sources: media exposure, media content, and social context that categorizes exposure to different media (Korhan & Ersoy, 2016).

Rosengren et al. (1976) proposed a more developed model of the use and gratification pattern. In his opinion, some basic high and low level human needs in interaction with distinct sets of intra-personal and extra-personal characteristics and also in interaction with the structure of the surrounding society, including the structure of the media and various sets of individual problems lead to a set of problems and solutions. This causes various motivations to find satisfaction or problem-solving behavior, and this leads to the emergence of different patterns of real media consumption and different patterns of other behavior, which leads to the emergence of patterns of satisfaction or dissatisfaction, and probably to the totality of the characteristics within and the extroversion of the person and ultimately affects the media structure and other social, political, cultural and economic structures in the society ((Chi et al., 2022). Uses and gratifications theory seeks to explain how people use mass communication tools to satisfy their needs and the motivations of these people in using the media (Urista et al., 2009).

The cultivation theory also provides a model for analyzing the impact of communication media with three assumptions: first, that there is a possibility of influencing specific and individual types or genres and media programs on people (Busselle & Van den Bulck, 2019). But measuring this effect is very difficult. The pervasive effect of communication media, especially television, happens in the long term. Therefore, it is important to focus on the media world as a whole and on the stories, messages and images that are broadcasted repeatedly. Second, media influence is generally symbolic rather than behavioral. Thirdly, the influence of the media is more towards maintaining the existing social and ideological order (Pelzer & Raemy, 2022).

In a general view, cultivation theory believed that those who are exposed to mass media will eventually see the world in a way that is more than conforming to the external reality, by making the media out of

reality. In response to criticism, Gerbner revised the cultivation theory. He added two other concepts of generalization and intensification. With these concepts, the fact that watching too much TV has different results for different social groups is considered. Gerbner states that "normalization" occurs when excessive viewing leads to the symmetry of viewpoints in groups; Intensification also happens when the effect of cultivation is greater in a certain group of the population (Gerbner, 1998).

Many researches have been conducted on the way teenagers use the Internet and virtual social networks and its positive and negative consequences, but not much study has been done on the methods of controlling the consequences of these virtual social networks for teenagers. Based on this, the present study was conducted with the aim of modeling the social harms of teenagers in virtual social networks.

Material and Methods

The current research is a quantitative study that was conducted with the correlation method. The statistical population included all specialists in the field of communication and modern communication media. Accessible sampling was used to select the sample. Participants were 154 people that 83 (53.9%) were men and 71 (46.10%) were women. In terms of educational level, 57.1% had master's degree and 42.9% had PhD degree. Structural equation modeling was used to examine the research model. For this purpose, the partial least squares method in PLS software was used.

The data collection tool was a researcher-made questionnaire that was developed in a qualitative process. This questionnaire has 33 questions with a five-point Likert response scale from very low to very high. Questionnaire dimensions were mental and psychological injuries (questions 1 to 8), weakening of social values (questions 9 to 17), violation of sexual norms (questions 18 to 21), moral injuries (questions 22 to 27) and change of behavioral patterns (questions 28 to 33). Index reliability, by two criteria Cronbach's alpha and combined reliability and convergent validity by average variance extracted and factor loadings; and divergent validity are measured by the root mean value of the extracted variance of the variables. Cronbach's alpha values for all dimensions are greater than 0.7 and it indicates acceptable reliability. Also, in table 1, the values of all average variance extracted are greater than 0.5 and as a result, the questionnaire (model) presented in current study has good convergent validity.

Table 1. Estimated values of validity and reliability evaluation indicators of online social harms variables

Dimension	Convergent validity	Discriminant validity			Cronbach Alpha	Combined reliability
	Average variance extracted (AVE	Cross loading	Fornell and Larcker criteria	Different-similar characters		
Mental injuries	0.55				0.88	0.91
Weakening of social values	0.55				0.90	0.90
Sexual violation	0.72		Confirmed		0.88	0.91
Moral harm	0.64				0.88	0.91
Changing behavioral patterns	0.60				0.87	0.90

According to Table 1, the convergent and divergent validity indicators indicate the desirability of the convergent and divergent validity of the online social harm's variable, the values of Cronbach's alpha coefficient and combined reliability indicate the accuracy of the measurement tool for measuring the dimensions related to this variable.

Results

The results of the first-order and second-order confirmatory factor analysis to estimate the factor loadings of the dimensions and items of the online social harms model were provided in table 2.

Table 2. The results of the first-order and second-order confirmatory factor analysis to estimate the factor loadings of the dimensions and items of the online social harms questionnaire.

Dimension	Factor loading	C.R	p	Item	Factor loading	C.R	p
Mental injuries	0.89	50.66	0.001	1	0.71	15.62	0.001
				2	0.73	14.26	0.001
				3	0.77	23.14	0.001
				4	0.76	18.58	0.001
				5	0.80	23.76	0.001
				6	0.77	20.38	0.001
				7	0.64	11.73	0.001
				8	0.75	20.16	0.001
Weakening of social values	0.91	61.16	0.001	9	0.63	10.30	0.001
				10	0.70	14.10	0.001
				11	0.80	24.43	0.001
				12	0.75	14.38	0.001
				13	0.75	14.36	0.001
				14	0.72	14.68	0.001
				15	0.76	18.24	0.001
				16	0.78	19.85	0.001
				17	0.76	19.83	0.001
Sexual violation	0.87	38.37	0.001	18	0.84	31.48	0.001
				19	0.86	31.95	0.001
				20	0.82	25.91	0.001
				21	0.87	42.76	0.001
Moral harm	0.90	52.16	0.001	22	0.75	15.12	0.001
				23	0.81	19.58	0.001
				24	0.78	20.14	0.001
				25	0.88	45.50	0.001
				26	0.80	27.44	0.001
				27	0.75	16.14	0.001
Changing behavioral patterns	0.86	37.18	0.001	28	0.76	18.02	0.001
				29	0.79	20.83	0.001
				30	0.74	17.49	0.001
				31	0.77	16.86	0.001
				32	0.78	21.95	0.001
				33	0.82	28.87	0.001

The estimated values in table 2 (factor loading, critical values and significance level) indicate that the factor loadings related to the dimensions and items of the online social harms model are in a favorable

condition. In fact, the correlation of this construct with the dimensions and items are estimated at a high level, so the convergent validity related to the dimensions of this variable is established at the level of the items. According to Table 2, the factor loadings of the dimensions of model of online social harms in a hierarchical manner (second order) are also satisfactory.

One of the methods used to measure discriminant validity is the cross loadings method. According to cross loadings, a particular item should have higher loadings on its own parent construct in comparison to other constructs in the study. Based on the output of the software, which can be seen in Table 3, the correlation value between the indicators and their related structures is higher than the correlation between them and other structures, which proves the appropriate discriminant validity of the model. In other words, the root mean value of the extracted variance of the variables in the present study, which are located in the main diameter of the matrix, is greater than the correlation value between them, which are arranged in the lower slots of the main diameter. As a result, the model has the appropriate fit status.

Table 3. Estimation of Fornell and Larcker Criterion matrix values

Dimension	Mental injuries	Weakening of social values	Sexual violation	Moral harm	Changing behavioral patterns
Mental injuries	0.74				
Weakening of social values	0.72	0.74			
Sexual violation	0.72	0.71	0.85		
Moral harm	0.73	0.73	0.77	0.80	
Changing behavioral patterns	0.73	0.71	0.66	0.75	0.78

The estimated values related to the Fornell and Larcker criteria and the different trait-same trait index are reported in the table 4. It should be mentioned that based on Fornell and Larcker (1981) criteria, it is expected that the mean square root of the variance extracted for each construct is higher than the correlation of that construct with other constructs. Regarding the index of different characteristic - same characteristic, it is expected that the geometric mean of the correlation coefficients between the items that are related to different structures is lower than the geometric mean of the correlation coefficients between the items that are related to the same structure. Therefore ,the ratio between different characteristics - the same characteristic should be smaller than 1.

Table 4. Estimating the criterion values of the different characteristic - the same characteristic

Dimension	Mental injuries	Weakening of social values	Sexual violation	Moral harm
Weakening of social values	0.83			
Sexual violation	0.81	0.81		
Moral harm	0.83	0.85	0.88	
Changing behavioral patterns	0.82	0.81	0.75	0.85

Discussion

The findings of the research showed that the average of all research variables or in other words the components and elements of the research paradigm model including (information bombardment, mental confusion, internet addiction, social interactions and family conditions, family values and traditional

customs, strengthening media literacy, strengthening family ties, strengthening the legality of virtual space, creating a suitable environment, strengthening social integrity, strengthening mental health, reducing internet crime) among the statistical sample of the research is estimated to be above average. The question of the quantitative part of the research was, what is the validity of the presented paradigm model in the qualitative part to control the social harms of teenagers in the use of virtual social networks? The results of the quantitative part of the research indicated that in order to check the validity of the main variables of the research, two methods of content validity (face validity) and construct validity (confirmatory factor analysis approach) and indicators related to this approach include convergent validity (average variance index extracted) and the discriminant validity (cross factor loadings, Fornell and Larcker criterion and different trait-same trait index) were used. In order to check the reliability of the measurement tool related to the main variables of the research, Cronbach's alpha coefficient and composite reliability indicators have been used. The results showed that convergent and discriminant validity indices indicate the desirability of important convergent and discriminant validity of the variables. Also, the values of Cronbach's alpha coefficient and combined reliability indicate the accuracy of measuring the dimensions of all variables and in other words, the reliability of the measuring tool of this variable. The estimated values (factor loading, critical values and significance level) indicated that the factor loadings related to the dimensions and items of all variables are in a favorable condition, in fact, the correlation of the variables with the dimensions and items related to these dimensions is estimated above, so the convergent validity related to the dimensions of the variables at the level of the items is established.

The emergence of virtual social networks, in addition to the positive consequences they have had for various societies, have also left negative effects on various parts of human societies. Different social groups have different reactions to these new social networks and, as a result, they experience different consequences. Adolescents are one of these social groups that are profoundly influenced by virtual social networks. They have lived and grown up with these virtual social networks. In a way, these teenagers can be considered the Internet generation. Therefore, it is not possible to prohibit teenagers from participating in these virtual social networks in a negative way, but appropriate policies should be made in this field in order to control and manage the social harms experienced by these adolescents. In any case, teenagers experience harm as a result of being in these virtual social networks, and there is no escape from it. Such damages can only be reduced and its consequences managed.

The results of this research are about the weakening of social values due to the use of social networks as a social harm among teenagers. This result is in line with the theoretical approach of " Gerbner cultivation theory". Gerbner (1998) believed that cultivation is not a unidirectional process, but is similar to an attraction process. According to Gerbner, the media is the creator of the symbolic environment. Media is not a window to the world or a reflection of it, but a world in itself. Cultivation theory argues that communication media have long-term effects, gradual and indirect but dense and important effects. They emphasize that media consumption has more attitudinal than behavioral effects. High consumption of media is seen as establishing attitudes that are more compatible with the world depicted by media

content than with the real world (Shrum, 2017). However, the results of this research are in line with another part of the theory that believes that the mass media cultivate the attitudes and values that already exist in the culture and help to preserve and spread these values among the members of a society.

The results of the present study showed that virtual social networks help to change these patterns more than they help to maintain existing values and behavior patterns. Also, the findings of this part of the research are in line with the research results of Memon et al. (2018). They have come to the conclusion that social networking leads to increased exposure to and engagement in self-harm behavior due to users receiving negative messages promoting self-harm, emulating self-injurious behavior of others, and adopting self-harm practices from shared videos. Another part of change of social values in teenagers due to the use of virtual social networks is the change of family values, which the results of the present study showed. This result is in line with the research of Christopherson (2007). By examining teenagers, he has come to the conclusion that the variables of feeling anonymous on the Internet and the amount of Internet use have a negative effect on family values. Also, the level of acceptance in the Internet has had a negative effect on family values. In addition, the more we enter the space of intimacy on the Internet, this space of intimacy on the Internet will cause family values to decrease, and this is probably due to the substitution of the Internet environment for them instead of the family.

The review of previous studies shows that such a pattern did not exist in previous studies and researches, and most of the researches dealt with the injuries experienced by teenagers and young people in virtual social networks and the effect of various factors, and the consequences of this issue. In the previous lines, the results of these studies should be examined in detail with the results of the present study.

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