

The Effect of Educational Intervention on Media Literacy among High School Female Students

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Abstract

Background

Recently, there has been a fast growth in the use of different kind of media especially in adolescents. Media literacy education is supported by numerous national organizations and institute as a potential tool to decrease negative media effects and to increase desirable use of media. However, there are little documents about their effects. This study was conducted to investigate the effect of educational intervention on media literacy among high school female students.

Materials and Methods

This quasi-experimental study was complete on 100 female students in Semirom city, Isfahan province, the central of Iran, in 2017. Eligible students were selected and randomly assigned as intervention and control groups. Then, a media literacy intervention (7 sessions of 40-55 minute) was delivered by skilled and trained educators in field of media as facilitators only in the intervention group. The media literacy measure was administered at pre-intervention, post-intervention. Data were analyzed by SPSS software (version 20.0).

Results

Based on results independent t-test, demographic variables in students of intervention and control groups were similar as well the mean of media literacy scores before intervention, but 2 months after the intervention the differences were statistically significant between the intervention and control groups in all media literacy domains ($P \leq 0.001$) except the creators of media message domain ($P=0.27$), and the selective uses of media messages ($p=0.21$).

Conclusion

The present study recommends media literacy education can be practicably included into schools as a method to promoting critical analysis of media products.

Key Words: Adolescent, Female, Iran, Media Literacy, Students.

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1- INTRODUCTION

Throughout the past decades, there has been a rapid growth in the use of different kinds of media such as TV, the Internet and mobile phones. Recently media has become extremely popular and widely used all over the world (1). Hence media have very immense effect on individuals specially children and adolescents since they increasingly use the internet to explore their worlds, mobile phones, video games etc. (2). Therefore there are concerns about the effects of different kinds of media on children and adolescents health and well-being. Accordingly Brown and her colleague was reviewed 10 years research about the effects of media on adolescents' health and well-being, they concluded that, the media contribute to eating disorder, aggressive behavior, inaccurate ideas about relationships, underage drinking and tobacco and drug use, as well as earlier sexual behavior (3).

A number of researchers have found that the media can serve as a kind of super peer for children and adolescents, normalizing and glamorizing often unhealthy behavior (4). Prohibition or limitations as well as censorship are decisions to reduction the negative effects of media on children and adolescents; however, these options are not permanently appropriate or even practical. Instead, media literacy education is supported by numerous national organizations and institute (5); as well numerous researches demonstrated that media literacy education has the potential to decrease negative media effects and to increase desirable use of media (6-7).

Media literacy is a type of skill-based understanding that can be used to discriminate between different types of media and media productions (8). Media literacy constituents are: ability to speak and listen, read and write, access new technologies, produce their own messages with a critical point of view (9). Media literacy gives children and adolescent deep

understanding of what is happening around them in the media universe (10). The main aim of media literacy is to make children and adolescents critically, appropriately, and literate in all types of media, as a result they are not the ones who control what they see and hear, but what they control (9). The main idea of media literacy is that children and adolescents will be more intelligent and critical media consumers and less vulnerable to harmful consequences if they know that media are constructed and sell values as well as products (3).

Accordingly recently research attention has been paid to applying the different kinds of media to promote children and adolescents' health and well-being as well to evaluating the effectiveness of such efforts. For instance following a media literacy training intervention for at-risk students, participants significantly improved their: ability to identify advertising techniques ,preferences for non-alcohol-related advertisements, negative opinions about drinking and smoking behaviors, media deconstruction skills, also significantly declined their positive perceptions of alcohol and cigarette content in advertising (11).

As mentioned, numerous studies have revealed the importance of media literacy education, but they have mostly been conducted in the Western context, and there have been a few studies examining media literacy education in the Asian context (12). To our information, only a few studies in this field in Iran have been down and most of them focused on the necessity and importance of media literacy (13), the relation between media literacy and information literacy (8), the relation between health literacy and media literacy (14), and a few focused on the effects of media literacy training program to promote knowledge and skills about media messages. For instance a school-based media literacy program performed to

Iranian female adolescent disclosed an increase in knowledge about media messages and their behavioral intention change (15). Also, following a media literacy training intervention for Iranian female university students, favorable attitude towards elective cosmetic surgery and body dissatisfaction decreased (16).

However, previous literature has identified main concerns in the media literacy education research. First of all, a few researches have explicitly evaluated the effect of media literacy education on students' attitude towards the use of different kinds of media. Another, researchers have faced challenges in correctly determining media literacy skills (17). In other words, limited research has been performed to examine how media literacy education can promote effective consumption of media contents and production. Therefore detailed evaluations of the media literacy educational interventions are needed. This study was conducted to investigate the effect of educational intervention on media literacy among high school female students.

2- MATERIALS AND METHODS

2-1. Study design and population

This quasi-experimental study was conducted on 100 high school female students. They were enrolled by multistage random sampling, in Semirum city, Isfahan province, the Central of Iran, in 2017. The sample size was determined based on the confidence interval (95%), and test capability (80%) according to the similar literature (8). At first 2 similar female high schools in Semirum city were selected and randomly were divided into control and intervention groups. After coordinating with the principals of selected schools, 50 students were chosen by random number table from each school. They were invited to participate to the study and were evaluated for inclusion. They must (a) had Internet access and

smart phone (b) be interested to participation. They were excluded if they had filled out the questionnaire incompletely and absence in two educational sessions.

2-2. Measuring tools

Demographic and media literacy data were measured through 2 self-report questionnaires:

2-2-1. Demographic Questionnaire

Demographic Questionnaire was a researcher-made questionnaire which consists of items about age, parent's education, parent's job, student perception of the economic situation of the family, Siblings number.

2-2-2. Media Literacy Questionnaire

Media Literacy Questionnaire was a researcher-made questionnaire which consists of 40 items based on the central concepts ; developed by the Center for Media Literacy CML (18); **A.** the selective use of media messages (questions 1–6), **B.** the media and its effects on individuals and society (questions 7–16), **C.** recognition of the creators of media message (questions 17–20), **D.** the creative techniques in media to attract audience attention (questions 21-25), **E.** different people understand media message differently (questions 26-30), **F.** values, lifestyles and points of view are represented in or omitted from media message (question 31-36), and **G.** why the media message being sent (question 37-40). All items have to be answered on 5-point Likert scale (1= completely agree, 2= agree, 3= not agree not disagree, 4= disagree, and 5= totally disagree). Scores can range from 40 to 200, with higher scores demonstrating greater media literacy. The content validity of the media literacy questionnaire was assessed by a panel of experts consisting of 10 experts in the field of health education, psychology,

media and communication; their corrective comments were applied to the questionnaire. The reliability of the questionnaire was also measured by Alpha Cronach's method in first to seventh dimensions, in that order, as 0.79, 0.82, 0.78, 0.86, 0.84, 0.79, and totally, 0.89, respectively.

2-3. Intervention

The intervention was provided only for the students in intervention group. Parental consent forms were distributed in selected schools, before the start of the intervention, and students of intervention group received and signed acceptance forms. The intervention was delivered by skilled and trained educators in field of media as facilitators. This intervention was based on 5 central concepts which developed by the Center for Media Literacy (CML) (18) as follow:

- A. All messages of media are constructed,
- B. Media messages are created by its own directions, with a creative language,
- C. Different persons experience the same media message in a different way,
- D. Media have implanted lifestyles, values, and points of view, and
- E. Most of the media messages are created to gain power and/or profit.

The educational intervention constructs upon a 4-step education process of consciousness, analysis, reflection and action and consisted of 7 sessions lasting 40–55 minutes. Based on central concepts of media literacy as mentioned above, each session was conveyed by a main question and was delivered by skilled and trained educator in field of media literacy as facilitator. Lecture, question and answer, role playing and active participation in group discussion were the main activities in the intervention. The facilitator encourages students to explore, discuss and practice media related skills.

- **Session 1-** What is media and its effects on individuals and society?
- **Session 2-** Who created this message?
- **Session 3-** What creative techniques are used to attract my attention?
- **Session 4-** How might different people understand this message differently?
- **Session 5-** What values, lifestyles and points of view are represented in or omitted from this message? and
- **Session 6-** Why is this message being sent?

In the last session, students analyze a media clip and examine their own levels of media consumption and create their particular media messages. In this intervention, students were taught to deconstruct different kinds of media messages that convey different values by key questions and main concepts, to query a message's purpose rather than accepting the values endorsed by media.

2-4. Ethical consideration

The Research Ethics Sub-committee of the Isfahan Medical University was approved this study (ID-code: 395646). Consent was obtained from all participants.

2-5. Data Analyses

Data were evaluated by statistical package for social sciences software SPSS version 20.0. To compare control and intervention groups, with respect to the qualitative variables such as parent's education, parent's job, student perception of the economic situation of the family Chi-square intervention was used. To compare control and intervention groups, with respect to the quantitative variables independent t intervention was used. To compare the mean scores of media literacy and its domains within the groups the Paired t-test was used. Statistical significant level was set as 0.05.

3- RESULTS

The aim of this study was to determine the effect of educational intervention on media literacy. A total of 100 female high school students (n=50 in intervention group, n=50 in control group) were selected to participate in this research. From eligible students in intervention group, 2 students were withdrawn by their parents, 4 students were excluded from the final analyses because they did not implement the program in two sessions, 1 student gave incomplete responses to the questionnaires, and 3 students were absent on the day of the post-test data collection.

From eligible students in control group, only 43 students complete questionnaires at per-test and post- test completely. The final sample consisted of 40 students in intervention group and 43 students in control group. The mean and standard deviation (SD) of the students' age in the intervention and control groups were 16.1 ± 8.2 and 16.04 ± 8.3 years, respectively.

There was no statistically significant difference between the mean age of students in both groups ($p=0.87$). Likewise there was no statistically significant difference between the number of siblings in the two groups ($p=0.74$). Also, parent's education ($p=0.18$), and parent's job, ($p = 0.30$) in the intervention and control groups was similar. The results also showed that the student perception of the economic situation of the family in the two groups was similar (**Table.1**).

Based on results independent t-intervention, the mean of media literacy in students of intervention and control groups were similar before intervention, but 2 months after the intervention the differences were statistically significant between the intervention and control groups in all domains but the creators of media message domain ($P=0.27$). Also, there was no statistically significant difference between the selective uses of media messages in both groups after the intervention ($p=0.21$) (**Table.2**).

Table-1: The comparison of parent's education and student perception of the economic situation of the family between intervention and control groups

Variables		Intervention group		Control group		P-value
		Number	%	Number	%	
Mother education	Illiterate	1	2.5	1	2.3	0.54
	Primary	3	7.5	5	11.6	
	Guidance	11	27.5	10	23.3	
	Diploma	14	35	11	25.6	
	Collegiate	11	27.5	12	37.2	
Father education	Illiterate	3	7.5	2	4.7	0.39
	Primary	8	20	5	11.6	
	Guidance	10	25	8	18.6	
	Diploma	6	15	15	34.9	
	Collegiate	13	32.5	13	30.2	
Economic situation	Low	10	15	5	11.7	0.14
	Moderate	18	45	21	48.8	
	Good	12	3	16	27.2	
	Excellent	0	0	1	2.3	

Table-2: The media literacy score before and after intervention in intervention and control groups

Media literacy domains	Times	Before Intervention	Two Months After Intervention	P-value
The selective use of media messages.	Intervention group	14.02±3.60	16.25±2.57	0.001
	Control group	14.66±2.35	14.12±2.05	0.24
	T- test	0.11	0.02	
Media effects on individuals and society.	Intervention group	21.02±3.26	23.75±2.91	0.001
	Control group	20.52±3.86	20.24±2.58	0.36
	T- test	0.94	0.001	
The creators of media message.	Intervention group	9.29±1.81	11.43±2.04	0.001
	Control group	9.04±1.91	9.13±1.89	0.78
	T- test	0.33	0.27	
The creative techniques in media to attract audience attention.	Intervention group	10.29±3.40	15.43±3.50	0.001
	Control group	10.12±2.37	10.27±3.12	0.78
	T- test	0.36	0.001	
The points of view are represented in or omitted from media message.	Intervention group	13.30±2.92	15.46±2.90	0.001
	Control group	12.62±2.40	12.85±2.05	0.56
	T- test	0.09	0.002	
Why the media message being sent?	Intervention group	7.50±1.46	9.18±2.12	0.001
	Control group	7.97±1.95	7.75±2.03	0.53
	T- test	0.22	0.004	
Different people understand media message differently.	Intervention group	12.47±1.92	16.02±1.57	0.001
	Control group	12±2.36	12.11±2.05	0.31
	T- test	0.32	0.001	

4- DISCUSSION

This study was done to examine the effect of educational intervention on media literacy among female high school students. In the pre-test phase response rate was desirable in both groups. As expected, in the intervention phase students and school principals welcomed the program. The results disclosed that demographic variables of the participants of the intervention and control groups were similar. Also, before the intervention, it was discovered that students in both groups were similar in their media literacy score in all domains. Pre-test scores for media literacy in both groups weren't desirable, and were consisted with some previous studies (19). In contrast with this finding, in Ashrafi and colleagues' study mean score of media literacy among university students was higher than moderate and relatively favorable (13).

Also, results of Pounaki and colleagues' study showed that media literacy of university students was appropriate (8); this contradiction maybe due to different age and different of education of participants. School-based educational interventions are important, because adolescence is also an important developmental period which adolescents begin to relate to the real world outside their home and families, forming patterns of interaction and behaviors with both peers and media (18). Two months after the intervention the statistically significant difference was seen between intervention and control groups in their media literacy score in all domains ($P < 0.05$) except one domain. In case of "the creators of media message" domain intervention group's scores did not significantly differ from those of control group ($P < 0.27$).

Consistent with our study, in previous studies, the positive effect of intervention on media-relevant outcomes has been seen, for instance in study by Hobbs also after the intervention significant differences were found for the ability to recognize the purpose, point of view, target audience, creative techniques used in media messages, and the ability to recognize misplaced or omitted information from a news media broadcast in audio or visual, written formats (20). Likewise in study by Duran after the intervention there were significant differences between the control group and the intervention groups' post-test scores on most (but not all) media literacy domains (21). As well in Finger's study at the first post-test, compared with controls, students in the interventions groups reported increased information of five key questions and main concepts of media literacy (18).

The results also revealed that in case of "the selective use of media messages" significant difference were not observed between the intervention and control groups post-test scores. Consistent with present study, in Walther study which pointing actual digital media use behavior in adolescents after school-based media literacy intervention the positive effects were found not for Internet use times (6). Inconsistent with this study, Geraee et al.'s study revealed educational interventions were efficient to improve the adolescents 'behavioral intention in dealing with mass media messages (15).

A probable explanation is that media use is such a predictable and repetitious behavior in the daily activities of today's children and adolescents. Hence reducing duration or frequency of such repetitious behaviors is difficult and time consuming. The selective and goal oriented use of the media requires new skills and to habit of new skills requires practice. To our knowledge, the present study is one of the few studies on the effectiveness of school-

based media literacy education in Iran and the first to address actual selective and goal oriented use of media messages. However our findings are favorable. Because our intervention was short, cost-effective, and significant changes were made in some aspects of media literacy. More research will be required to confirm these findings and to provide further insight on moderating and mediating variables. It is our responsibility as health professionals and educators to arrange children and adolescents for the media-driven culture in which they are occupied, that they may be effective information managers, active participants and intelligent consumers.

4-1. Limitations of the study

Present study was not without limitations. First, students that participated in this study were a comparatively identical group consisting of, female high school students from one small city, therefore assessing the generalizability of our results is difficult. Future research is required that investigates educational intervention with a more diverse sample of students. Second, we used only self-reporting questionnaires to measure media literacy, it would be better for future study to examine media literacy by both self-report and observational measurement or other methods such as interviews with parents. Finally further research should investigate the lasting effects of this educational intervention.

5- CONCLUSION

Since adolescence is an important developmental period which children and adolescents begin to relate to the real world outside their home and families, forming patterns of interaction and behaviors with peers and media; school-based media literacy interventions are imperative and vital. The present study confirmed that media literacy education can be practicably included in schools as a

method to promoting critical analysis of media products, the goal-oriented and selective use of media messages. More related research will be required to provide further insight on efficacy of school based media literacy education and recognition of its moderating and mediating variables.

6- CONFLICT OF INTEREST: None.

7- ACKNOWLEDGMENTS

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