

## The Effect of Media Education on Teenagers' Knowledge and Behavioral Intentions to Manage Media Messages by Stage of Development

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### Abstract

The media influences teenagers' health-related behaviours. Studies show that The most excellent method to shield teenagers from dangerous press is to educate them on media literacy. Influences, censorship, and restriction are no more effective strategies. This pilot study aimed to assess how a media literacy program impacted a sample of female students' understanding and behavioural intentions regarding the several phases of change in their approach to media messages. The research was conducted using control group designs that were pre- and posttest based. About 198 female students participated in the study; 101 served as a control group, while 97 received therapy. Curriculum implementation relied on interactive teaching-learning strategies. Using a three-part questionnaire—a pretest pretest, a posttest 1, and a posttest 2—reliable and standard self-report data was collected. The study data was analyzed utilizing SPSS statistical software, version 14, including descriptive and inferential statistics. The results showed that the intervention group's average comprehension scores rose considerably ( $p=0.001$ ) after the training session. The disparity, however, did not reach statistical significance ( $p=0.200$ ) in the control. According to the pretest results, A considerable number of the individuals in the intervention group (64 people) and the control group (61 people) were in the pre-contemplation and contemplation/retest results. However, after the intervention, the phases of the intervention group of change showed a substantial improvement ( $p=0.001$ ) compared to the oppressed group. The original group's student distribution was similar to what was seen in the pretest pretest about the phases of change. The study's findings demonstrated how well-designed educational activities might increase teenagers' knowledge of and intent for appropriate behaviour in reaction to messages in the media.

**Keywords:** Control group design, Comprehension scores, Contemplation stage, Descriptive statistics, Health-related behaviors, Inferential statistics, Media literacy, Teenagers,

## 1 Introduction

A media-dependent culture is the defining characteristic of the modern era, with a wide variety of media readily available to all, especially young people and children (Scull & Kupersmidt, 2011). Generally speaking, Mass media was created in response to the need for people to satisfy requirements for information and news, amusement, and sociability. But sometimes, the media's reporting lacked thoroughness and it does not serve as a window into reality precise, and objective (Ulaş et al., 2012).

These days, kids Yet in addition to watching conventional media, like TV, teens now spend a great deal of time on digital media. (Oxstrand, 2009). Teenagers are becoming more and more concerned about this as a result. The impact of the media on crimes, violence, and violent behavior (Huesmann & Taylor, 2006), partnerships for sex (Pinkleton et al., 2012), academic achievement (Schmidt & Vandewater, 2008), physical appearance (Yamamiya et al., 2005), food, the increased prevalence of obesity, and sedentary behavior (Higgins & Begoray, 2012), abuse of alcohol and drugs (Primack et al., 2006), tastes in food (Dovey et al., 2011), and modifications to the linguistic structure of discourse (Ulaş et al., 2012) are some issues associated with these concerns. Restrictions and censorship, according to certain media authorities, are useful strategies for resolving these problems. Limitations and censorship, on the other hand, are undesirable solutions to the worries regarding the mass media and how it affects kids and teenagers (Heins & Cho, 2003). Specialists in general health have also employed a range of tactics to mitigate the media's effect on health. Thus far, the problem has been addressed through the use of strategies like social marketing, media content regulation, and limiting children's media consumption (Bergsma & Carney, 2008).

Parents are worried about their kids' media use since the majority of it happens at home, and since changing media contents and government laws and regulations are not suitable methods for monitoring media consumption, reducing teenagers' Additionally, media exposure is not always useful. Consequently, when guiding children's media intake, parents' roles and the kids' perceptions

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should be considered (Bier et al., 2011). However, research indicates that parents in Iranian culture do not significantly restrict their children's access to television, video games, the Internet, or other forms of media (Javadi & Eghbali, 2007). Teenagers should therefore be given cognitive and motivational frameworks so that they can both respond to media content and act naturally. Teaching kids and teens media literacy is a crucial step towards accomplishing this goal. The CDC, the ONDCP, the EC, the EP, along with UNESCO's American Academy of Pediatrics are among the several groups that have issued strongly worded pronouncements on the subject of media literacy. The Centre for Media Literacy (CML), the Association for Media Literacy (AML), and the National Association of Media Literacy Education (NAMLE) are among the media groups that have issued strong comments on the topic of media literacy (Bier et al., 2011).

"The ability to understand, analyze, evaluate, and create media messages" is how media literacy is defined. People who get media literacy training are more skeptical of media content. (Austin et al., 2006). As a result of their need for more realistic messages of a higher caliber, people high levels of media literacy eventually lead to an improvement in the standard of media (Ulaş et al., 2012).

Empirical data indicates that interventions grounded in theoretical concepts yield more effectiveness than behavior-based approaches. Furthermore, in order to replicate and advance findings, the significant efficacy of the therapies necessitates the development of new approaches and state-of-the-art (Wright et al., 2009). Numerous change theories have been created thus far, offering frameworks for treatments aimed at assisting individuals in acquiring positive, healthpromoting behaviours. Transtheoretical Model (TTM) and Theory of Planned Behaviour (TPB), the two primary theories on changes in health-oriented behaviours, are mostly based on personal goals and beliefs (Floyd et al., 2007a).

A transtheoretical model might be a helpful foundation when designing and implementing programs to encourage and support healthy lifestyle choices (Wright et al., 2009). In general, four constructs make up a transtheoretical model. The four stages of change are as follows: (Rai et al., 2020) temporal readiness for behavior modification; (Scull & Kupersmidt, 2011) decisional balance, which considers the proportional importance of change's alleged advantages and disadvantages; (Fuchs, 2008) situational self-worth, which is the conviction that one can alter behavior in advantageous social and emotional conditions; and (Wan & Gut, 2008) processes for

change, or the behavioral and scientific techniques people use to go through the stages (Di Noia et al., 2008).

The trans theoretical paradigm's central tenet is "stages of change." Rather than seeing behavioural changes as a binary phenomenon, this model views them as a process (Molaison & Yadrick, 2003). "Stages of change" is a crucial concept since it symbolizes the temporal dimension. Historically, behavioural shifts such as giving up alcohol, tobacco, or overeating were seen as distinct events. Conversely, the transtheoretical model postulates that change is a dynamic phenomenon that arises from movement through multiple discrete stages throughout time. Furthermore, it is recommended that individuals strive numerous times to modify their behaviour in order to attain complete success (Bernardes & Caramori, 2011). As was previously established, in order for someone to change their behaviour, they must go through multiple stages in the stages of change model. Every stage represents a discrete moment in the individuals' preparedness for change, and it is expected that they will need to complete a specific set of tasks within a given amount of time in order to advance to the subsequent step (Floyd et al., 2007b).

Regretfully, despite the mass media's growing tendency in India, no attempts have been done in this area. Given this disparity, conducting research and educational activities appears to be vital in our country. Examining the transitions that take place before and after receiving media literacy training, this study aims to describe the pattern of behavioral intention and average level of knowledge among a group of Iranian female students who were exposed to media messages.

## 2 Literature Review

According to this study (Sari, 2023) which provides a comprehensive overview of adolescent health promotion strategies, media, and their efficacy, we aim to summarize dispersed studies. The literature review was utilized to write this article. This page covers books, periodicals, and the agency's published health profile books. Health promotion approaches and media for teenagers should be based on situational analysis. Additionally, it considers target age trends to engage them. The method of delivery strongly impacts the target's reaction to information. Using many senses is more effective. Include an environment breaker for procedures that might get dull and repetitive over time. Social media is suitable for disseminating information due to teens' everyday access.

Incorporating reproductive health education into the curriculum via peer education may enhance teenage knowledge.

This study (Geraee et al., 2015) examined how a media literacy training program affected 198 female students' knowledge and behavioural intentions. After the training, the study found that the treatment group's knowledge mean scores increased significantly, while the control group's scores remained relatively unchanged. Compared to the stages of change in the intervention group were significantly better than those in the control group. This study's results support that structured learning programs might help teenagers better understand and adhere to appropriate conduct guidelines while interacting with media messages.

This study (Lajnef, 2023) explores the effect of online influencers' unique characteristics on teens' conduct in Tunisia. It proposes a fresh method for creating group cognitive maps, revealing that these features are linked to and validated by teens' conduct. The results, which emphasize the influencers' impact on young people's views and decisions, provide insightful information for psychologists and scholars.

This study (Reem, 2022) investigated how students' capacity to recognize fake news is impacted by MIL, or media and information literacy, is taught by educators. In a one-group study, 100 undergraduate Jordanian students were randomly selected as the sample. The participants completed two post-tests and a pre-test consisting of ten two a closed-ended along with two openended questions on how to spot false information. As per the research, learning about MIL helps students become adept at spotting fake news. According to the study, after completing the MIL course, students were able to recognize and distinguish fake news using methods that were wellfounded and scientific. Our results provide a wealth of recommendations for scholars and practitioners in this field.

According to this study (Cascio et al., 2023) Teenagers nowadays are referred to be "digital natives," and their usage of technology and digital media (TDM) is essential. TDM has been connected to risky actions like drinking more booze consumption and social media usage. improved socioemotional health and social media connections. However, most studies adopt a risk-centered approach and lack evidence on potential mediating and moderating factors. This protocol's goal is to look at the impacts of TDM exposure on several areas of development and

health consequences. In order to better understand teenage health and risk behaviors, the study will look at three studies: one that used TDM to assess self- and other-generated TDM material as socioemotional well-being predictors, one that used functional MRI to assess mental and behavioral health, and one that used a mixed methods design.

According to this study (Vahedi et al., 2018) Media promotes risky health behaviours (RHBs) including drug use and unsafe sexual engagement to youth. To reduce RHBs, media literacy programs emphasise critical media consumption. They may favourably affect RHB attitudes and behaviour, however this is unknown. Our meta-analysis included 15 studies (N = 5000) 20 studies (N=9177) evaluated media literacy skills, while 20 studies examined attitudes and intentions regarding RHBs. Attitudes and intentions (Hedge's  $g = .100$ , [95% CI,.01-.]) and media literacy skills (Hedge's  $g = .417$ , [95% CI,.29-.54]) saw positive benefits. Intervention medium along with target behavior influenced attitudes and intentions, but media literacy skills remained unaffected. The degree to which these interventions influence attitudes, behaviors, and media literacy varies with the medium and the target audience. Programs for teenage health are taken into account.

### 3 Methods

Due to the absence of media literacy training in India This research was conducted as a pilot project using an educational experiment that was randomly controlled.

#### 3.1 Sampling Population and Sampling Technique

In Delhi, India, four state high schools provided 198 female students for the research. Using a random selection procedure, a cohort of students was chosen. Ultimately, 198 students were chosen for the research, of whom 101 were placed 97 in the placebo group & 97 in the therapeutic group.

#### 3.2 Data Collection

A questionnaire that participants completed was used to collect data for the research by both groups in three stages: prior to the training program, shortly after, and one month later. The questionnaire's content validity was verified by consulting five subject-matter experts. There were two portions to the questionnaire: seven case, essay, or open-ended questions made up the first segment of knowledge questions. These were scored analytically. The overall score ranged from 0 to 5. Two

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independent raters assessed the knowledge construct after randomly selecting 20% of the surveys. Regarding 78% of the scores, raters concurred.

In this research, knowledge was defined as the capacity to recall specifics about message impacts from the media and different potential responses to them, the methodologies employed in crafting media messages, the overt and covert significances of messages, and the diverse potential interpretations. The students' stages of development were evaluated by accurately defining the suitable and crucial handling of media messages and by enquiring about the alignment of the student's current behaviour with this circumstance. Students who expressed no consideration were categorized as belonging to the "pre-contemplation" group. In contrast, those who acknowledged thinking about the situation but took no action were placed under the category of "contemplation". In addition, pupils who reported having engaged in conversations with knowledgeable individuals and had made plans to take action were classified as "preparation." Ultimately, students who asserted that they had behaved appropriately for over a month were categorized as 'act'; conversely, those who claimed to have "maintained" appropriate behaviour for more than six months were classified as such.

Three training program sessions were conducted using interactive instructional and educational strategies and supplemented by distributing brochures to the students. Given that a significant fraction of pupils in each group were determined During preliminary studies, the training tactics were intended to be in the phase of pre-contemplation, with the primary goal of improving students' understanding of adolescent health about media, as well as their awareness of various potential responses to media content. The aim was to promote accurate interpretations of media messages and encourage active, critical engagement with such messages, to impactintending to impact pupils' lives both now and in the future.

### 3.2.1 Statistical analysis

The statistical program SPSS, version 14, was used to analyze the data. The data was subject to non-normal testing according to the K-S Test, hence non-parametric tests such as Mann Whitney and Friedman were used.

## 4 Result

There were parallels between the two groups of students' ages, genders, and types of schools. Both groups' knowledge scores were not substantially different from one another in the pre-test analysis ( $p=0.2$ ). On average, the students in the intervention group improved their knowledge from  $0.67\pm 0.42$  on the pretest to  $3.15\pm 1.13$  on the first posttest. The second post-test achieved an average knowledge score of  $2.87\pm 0.89$ . Across all three stages, the supervised group maintained a constant average knowledge score. Statistical analysis using the Friedman along with Wilcoxon tests revealed that the study groups' average knowledge scores changed significantly. ( $p=0.001$ ) (Table.1).

**Table 1: Knowledge mean scores in the groups before and after the training program**

Test Groups	Pre-test Mean $\pm$ SD	Post-test 1 Mean $\pm$ SD	Post-test 2 Mean $\pm$ SD
Intervention N=101	0.67 $\pm$ 0.42	3.15 $\pm$ 1.13	2.87 $\pm$ 0.89
Control N=97	0.64 $\pm$ 0.56	0.68 $\pm$ 0.59	0.66 $\pm$ 0.57
p	0.200	0.001	0.001

The findings of the chi-square test showed that when it came to the distribution of the two groups' intentional behaviour status according to changing phases, there was no statistically significant distinction ( $\chi^2=0.78$ ,  $df=3$ ,  $p=0.8$ ). More than half of the students in both the intervention and the untreated groups were in the pre-contemplation stage, with 64.35 and 62.88% of students, respectively, at this stage. Only 2.06% and 2.97% of students made it to the maintenance stage among the control and treatment groups.

On the first post-intervention exam, 62.37% of intervention group students were in the preparation stage, while 12.87% were in the action stage. This proportion was 56.43% within the second posttest and 9.90% in the third. Conversely, over 50% of students in the control group were still in the before-contemplation stage, and the subsequent tests' breakdown of the students' phases of change matched the pretests' breakdown.

The statistical analysis demonstrated a notable improvement in the pupils' performance within the phases for the intervention group of change ( $p=0.001$ ). However, about the phases of change before and after the intervention, there was no discernible difference in the rate of distribution of students in the control group. (Table 2).

**Table 2: Frequency distribution of the students regarding the stages of change before and after the educational intervention**

Groups Stages of change	Pre-test		Post-test1		Post-test2	
	Intervention N=101 F (%)	Control N=97 F (%)	Intervention N=101 F (%)	Control N=97 F (%)	Intervention N=101 F (%)	Control N=97 F (%)
Pre contemplation	65 (64.35)	61 (62.88)	6 (5.94)	63 (64.94)	10 (9.90)	61 (62.88)
Contemplation	15 (14.85)	17 (17.52)	9 (8.91)	15 (15.46)	16 (15.84)	15 (15.46)
Preparation	11 (10.89)	12 (12.37)	63 (62.37)	12 (12.37)	57(56.43)	10 (10.30)
Action	7 (6.93)	5 (5.15)	13 (12.87)	5 (5.15)	10 (9.90)	7 (7.21)
Maintenance	3 (2.97)	2 (2.06)	10 (9.90)	2 (2.06)	8 (7.92)	4 (4.12)
p	* $\chi^2=0.78$ 0.8		* $\chi^2=115.78$ 0.001		* $\chi^2=101.26$ 0.001	

\* Statistical test was performed after merging the two last groups (action & maintenance)

#### 4.1 Discussion

This study examined the efficacy of a training course that used the trans-theoretical model's "stages of change" idea—the program aimed to improve kids' comprehension and desire to interact with media messages. The study's findings demonstrated that the training program improved the treatment group of students' aptitude for critically and actively reacting to media messages.

Most people consider knowledge essential for bringing about behavioural change. Knowledge is regarded as a fundamental characteristic of behaviour, and greater levels of knowledge are linked to greater proportions of constructive behaviour. However, evidence demonstrates that planned

educational interventions effectively improve knowledge and facilitate the acquisition of desired behaviours (Kaveh et al., 2013).

The pre-test portion of this study revealed that students have a limited understanding of media literacy. This suggests that there is a shortage of educational programs in our country that address this issue, and highlights the importance of implementing such programs to meet the students' needs. Hence, the substantial rise in The success of such courses in improving students' comprehension of media is supported by the mean knowledge score of the therapeutic group after their training session in both phases. This outcome is consistent. with a large amount of research on literacy in media instruction. A one-day session on communication education improved participants' comprehension of media literacy, according to Kupersmidt and Scull's findings (Scull & Kupersmidt, 2011).

According to the findings of the research, a substantial During the pre-test, participants were separated into two groups: individuals who were prepared to actively respond to media messages and those who did not. After therapy, the intervention group showed significantly better transformation phases compared to the control group. Recent findings from the work of Kupersmidt and Scull, children who received media literacy instruction were much less likely to misuse alcohol or cigarettes. (Kupersmidt et al., 2012).

It was also found that having media literacy was linked to a decreased likelihood of drug and alcohol misuse, according to research through TQ, Tein et al. (2010) along with Kupersmidt et al. (2011) that assessed teenagers' media literacy and its relationship regarding drunkenness, smoking, and future susceptibility. (Page et al., 2011). The "stages of change" concept in the trans theoretical model is founded on the belief that training can enhance an individual's progression through several stages of development. Each stage in this model shows the level of acceptance and effectiveness of the training by individuals (Whysall et al., 2006). In addition, in order to advance to the next round, the players must complete all required duties in a timely manner. At every level, this means that people need specific strategies for transformation (Callaghan & Herzog, 2006).

According to this concept, persons Those who are in the early stages of contemplation need knowledge on the risks connected to their present behavior, while people who are in the latter

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phases need helpful advice on how to change their behavior (Whysall et al., 2006). Therefore, it is necessary to implement strategies such as raising awareness to facilitate the transition of persons from the stage of pre-contemplation to the stage of contemplation (Glanz et al., 2008). According to the study's findings, learners in the intervention group demonstrated a marked improvement in their development from the pre-contemplation to the thought along with preparation stages after strategies were implemented to raise awareness of frequent media use, the negative impacts of media, and different ways to respond to them. It was formerly believed that the components behind each unique behavior were related to the development of the stages. Consequently, it's a good idea to consider finding and assessing the key elements that aid in progressing through several stages, such as a desire for change, self-confidence, skill trust, and social support. Potentially more effective medicines could be developed using this data (Dino et al., 2004).

## 5 Conclusion

Using a randomized controlled trial methodology, this preliminary study evaluated the effectiveness of a media fluency training program among female students in Delhi, India's secondary schools. According to the study's findings, the intervention significantly improved students' media literacy knowledge and ability to analyze media messages critically. Students in both the control and intervention groups were mainly unaware and needed to be made aware of and unmotivated to critically engage with media messages before the intervention started, having progressed to the pre-contemplation stage. Following the intervention, there was a discernible shift in the participants' knowledge ratings, which rose substantially. The study found that students in the intervention group made much more progress throughout pre-contemplation to the thought and preparation stages of media development when strategies were implemented to raise awareness of frequent media use, the adverse effects of media, and different ways to respond to them. Some have hypothesized that the steps in the process are related to the various types of information or stages of transformation that form the basis of each behaviour. Other research has shown that educational activities may promote media literacy and inspire positive behavioural changes; the intervention's performance corresponds with that. The intervention strategy was based on the "stages of change" concept from the transtheoretical model, highlighting the need for tailored

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interventions based on students' level of change preparedness. The study stresses the need for media literacy education in the classroom to counteract the media's growing influence on adolescents. These programs improve students' comprehension and critical engagement with media messages, which can lead to improved decision-making and healthier behavioural results.

Future studies should examine the long-term effects of media literacy instruction and concentrate on bigger, more varied groups. Such interventions may be even more successful by identifying and targeting the particular elements that promote advancement through the phases of transformation. Encouraging young people to critically and responsibly navigate the complex media world might be achieved by implementing countrywide comprehensive media literacy programs.

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