Effects of portrayal of smoking in movies on adolescents attitudes

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ABSTRACT

Objective
To investigate the effects of smoking as portrayed in movies, on the attitudes towards smoking of adolescents.

Method
A sample of 27 adolescents, 13 boys and 14 girls were selected from a local private school in Islamabad. After establishing a baseline, subjects were exposed to positive or negative stimulation in terms of smoking and later tested on ATS-18 scale on the four trials. The attitude scores were compared through the trials to obtain the overall change in attitude of the groups towards smoking.

Results
There was a significant different in the attitude of adolescents exposed to positive stimulation on repeated trials whereas there was no significant effect of negative stimulation on the attitude change on repeated trials. There was no difference in the strength of the positive and negative portrayal on attitude towards smoking. Overall, there was a difference in the attitude change of boys and girls. On positive portrayal, boys experienced more attitude change in positive direction than girls. Whereas, on the negative portrayal condition, girls reported more change in negative direction than boys.

Conclusion
There is a significant effect of positive stimulation on repeated trials in changing adolescent’s attitudes towards smoking in movies. (Rawal Med J 2009;34: ).

Key Words
Attitude, portrayal in movies, smoking, adolescents.

INTRODUCTION
Attitudes, in terms of social psychology, are defined as a tendency of evaluating an object with some favor or disfavor involving the affect, cognition and behavior of the person holding the attitude. Mass-media is one of the greatest influences in formation and change of attitudes in modern times. Movies, as not initially anticipated to be used as an advertising agent, has recently been used for smoking advertisement and thus in the change of attitudes of adolescents, a group highly affected by this medium of entertainment. Many tobacco companies and movie-makers are shifting their interest from explicit television based advertisement to more secure, implicit
and long-lasting impact of movies. The recent analysis of movies by a Project SmokefreeMovies, 2006, has shown that 75% of all Hollywood movies portray tobacco use. In another study, it was concluded that the use of tobacco by popular actors on screen has the greatest impact on initiation and modeling behavior in adolescents. The aim of this study was to assess the effects of smoking, as portrayed in movies, on the attitudes towards smoking of adolescents.

SUBJECTS AND METHODS

A sample of 27 adolescents from the age group of 13 to 15 years was selected from a local private school in Islamabad. The sample consisted of 13 boys and 14 girls with the average age of 14 years. Initially, self-reporting ‘Attitudes towards Smoking Scale’ (ATS-18) developed by Etter et al was adapted and added with distracting items to reduce the effect of participants responding to the questions in a socially acceptable manner. The maximum scores that a subject could reach were -42 to +30, with a final negative score showing a negative attitude and vice versa. The second part was the selection of movie clips taken from DVD ‘Something Stinks in Hollywood’. Already identified themes in the DVD were taken for groups in the following way. The clips were used as a controlled stimulation for four unique groups of males and females. Positive stimulation was regarded as an image of smoking that can cause a favorable change in attitude towards smoking and vice versa. For group of girls, ‘glamorous’, ‘sexy’ and ‘calming’ themes were taken as positive stimulation and ‘evil’ was taken as negative stimulation portrayed by the female celebrity smoker. For group of boys, ‘glamorous’ and ‘calming’ themes portrayed by the male celebrity smoker were taken as positive stimulation and ‘evil’ was taken as negative stimulation.

The experiment was carried out in the following way. First, the participants were pre-tested on ATS-18 for the development of a baseline measure. These subjects were then assigned to balanced groups based on their scores. This was done to eliminate the factor of constructing groups having participants with similar pre-experimentally established attitudes. Equivalent time samples design was used which is an extension of time series design. The rationale behind choosing this design was to assure that results of experimental intervention for attitudinal change are not transient or unstable. The design can be explained as follows:

\[
X_1 O_1 \quad X_2 O_2 \quad X_3 O_3 \quad X_4 O_4
\]

where, \(X_1\) is the Experimental treatment, \(X_2\) is the Control and \(O_1\), \(O_2\), \(O_3\), \(O_4\) are observations to record the effects of \(X_1\) and \(X_2\). The four subsequent trials were shown in one line to indicate that the same group of subjects is being observed. Therefore, the same group will serve as the experimental and control group. The gap between these observations was kept equal i.e., three days.

The four clips selected were as follows, with two forms, one as an experimental treatment and other as control, which made a total of eight clips: Male smoking positively stimulating, female smoking positively stimulating, male smoking negatively stimulating, and female smoking negatively stimulating. The control was taken as a neutral stimulation with no portrayal of smoking for all the groups.

In the first treatment, the chosen experimental clips were shown to the four groups. Each group was seated separately by turn in the auditorium of the school with movie clips shown on the
multimedia projector. Each group took fifteen minutes, five minutes for stimulation and ten minutes to complete the questionnaire. Background information was given with the scenes shown for the understanding of the viewers. Students were assigned numbers and were not to write their names on their questionnaires to ensure confidentiality. The second observation was a control, followed by a repeated experimental treatment and ended with another control exposure. Thus, the whole experiment was divided into four readings with four different groups. At the end of the last reading, a debriefing session was arranged in which a PowerPoint presentation designed by Screen-Out project was utilized along with a fifteen minute documentary from the DVD “12, 000 lives a year, A case against smoking in movies.” Subjects were also given a flyer on “Take smoking out of Kid-rated movies” designed by the Screen-Out Smoke Free Movies project. The authorities and participants were thanked for their cooperation and time for helping conducting the data collection. Data analyses were performed through SPSS 13. \( p < 0.05 \) was considered as statistically significant.

RESULTS

The first hypothesis, “When smoking is portrayed negatively in movies, the effect is an attitude change in the negative direction” is tested by comparing the scores of negatively stimulated subjects on baseline measure to their scores on trial 4. On average, participant’s scores on baseline measure do not significantly differ from scores on Trial 4. Therefore, the hypothesis has been rejected.

Table 1. Mean, Standard Deviation, and t-value of scores of Negative & Positive Portrayal Group on Baseline to Trial 4 (N=15, N=12).

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th></th>
<th>Trial4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>ATS score on Negative Trial</td>
<td>-19.53</td>
<td>13377</td>
<td>17.33</td>
</tr>
<tr>
<td>ATS scores on Positive Trial</td>
<td>-23.75</td>
<td>12.196</td>
<td>-11.83</td>
</tr>
</tbody>
</table>

\( df = 14 \) \( df = 1 \)

For the second hypothesis, “When smoking is portrayed positively in movies, the effect is an attitude change in the positive direction” is tested by comparing the scores of positively stimulated subjects on baseline measure to their scores on the trial 4. It can be clearly interpreted from the tables above that positive portrayal has created a significant difference on repeated trials on the attitude towards smoking of adolescents. Hence, the hypothesis has been accepted.
Table 2. Mean, Standard Deviation, and t-value of Positive portrayal group and Negative portrayal group average scores on Trial 1 & 3 (N=27).

<table>
<thead>
<tr>
<th></th>
<th>Positive portrayal group</th>
<th>Negative portrayal group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n=12)</td>
<td>(n=15)</td>
</tr>
<tr>
<td>M</td>
<td>17.63</td>
<td>15.78</td>
</tr>
<tr>
<td>SD</td>
<td>15.78</td>
<td>12.2</td>
</tr>
<tr>
<td>t</td>
<td>0.488</td>
<td>0.488</td>
</tr>
<tr>
<td>P</td>
<td>0.63</td>
<td>0.63</td>
</tr>
</tbody>
</table>

The third hypothesis, “Positive portrayal of smoking will have stronger impact in changing attitudes as compared to negative portrayal of smoking” is tested through adding the scores of participants on Trial 1 and Trial 3 that were the experimental treatments. Baseline scores, Trial 2 and Trial 4 are exempted from these averaged scores as no stimulation related to smoking is given to the participant on these three measures. These added scores for the two portrayal groups, negative and positive are compared through independent samples t-test. On average, participant’s scores on positive portrayal condition do not significantly differ from scores on negative portrayal condition. Hence, the hypothesis has been rejected.

Table 3. Gender Differences in scores of boys and girls (Boys=13, Girls=14).

<table>
<thead>
<tr>
<th></th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n=13)</td>
<td>(n=14)</td>
</tr>
<tr>
<td>M</td>
<td>-8.96</td>
<td>-22.86</td>
</tr>
<tr>
<td>SD</td>
<td>14.79</td>
<td>8.51</td>
</tr>
<tr>
<td>t</td>
<td>3.021</td>
<td>0.006</td>
</tr>
<tr>
<td>P</td>
<td>0.006</td>
<td></td>
</tr>
</tbody>
</table>

For the last hypothesis “Gender differences exist in the attitude change after exposure to positive or negative portrayal of smoking in movies.” Thus, gender differences were computed by applying independent samples t-test on the averaged scores of participants on Trial 1 and Trial 3 on which experimental treatment was introduced. On average, participant’s scores of boys significantly differ from scores of girls. Thus, there is a difference in the way boys and girls have varied on the attitude scores on the two conditions through the treatment trial. The difference in means show that boys have changed more in comparison to girls though with a considerable higher standard deviation. Hence, the hypothesis has been accepted. There is not a significant difference on the change between boys and girls on positive portrayal. On the other hand, there is a significant difference the way change occurred between boys and girls on negative portrayal. In a detailed analysis, it was inferred that on the positive portrayal condition, boys had considerably changed more in positive direction than girls whereas on the negative portrayal condition, girls had considerably changed more in negative direction than boys. The hypothesis thus is partially accepted.
DISCUSSION

The application of the results above is in a number of areas. First, the results prove many longstanding theories of effect of modeled behavior on attitude change and formation. Smoker celebrity success and prestige has a direct impact on adolescents picking up of a cigarette. The relative characteristics of a model, audience, and their demographics like age or gender, the situational context of reinforcers or punishers, all play a major role in the attitude towards a behavior and portrays it to be highly desirable or undesirable for the audience. Second, images as they are portrayed in the present world are more inclined towards positivity whether shown as glamorous, rebellious or tough. Adolescents seek adventure, uniqueness and external world models with less focus on conventions or morals of the culture or the family. This factor makes the media and movie industry one of the strongest teachers for youth. Lastly, it has been proved that smoking images even in a violent or evil setting should be discouraged since it is proved to be showing prevalence and acceptability of the act to the audience. Also, as this industry has been exploited for the advertisement of tobacco brands and monetary benefits for the companies producing them, there should be a campaign for government and public realization to take desired steps for the eradication of this growing concern.

CONCLUSION

The evidence in this study has reconfirmed the unchecked tobacco depiction in movies and its hazardous effects on youth perception. It also proves that a smoking message either given in the negative or positive light in a movie tends to give a favorable message of acceptability to the viewer and thus, should be discouraged. The gender differences show that boys are more vulnerable to these messages than girls.

REFERENCES


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APPENDICES

Adapted Scale - Attitudes towards Smoking-18

Sample Items:

1. Cigarette smoke leaves an unpleasant smell.
2. People waste too much money on cigarettes.
3. Second-hand smoke is dangerous to those around the smoker.
4. People don’t like being dependent on cigarettes.
5. People would have more energy if they did not smoke.
6. After a cigarette, one is able to concentrate better.
7. I like the motions of smoking.
8. I would like to hold a cigarette between my fingers.

Clips:

2. S.W.A.T. Rated: PG-13 Columbia Pictures (Sony) 2003
3. 101 Dalmatians. Rated: G, (Disney) 2000