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## SYMPOSIUM

*Exposure to Alcohol Content in the Entertainment Media*

201–204

ORGANIZER/CHAIR: Kristina Jackson

## 201

## COMPARING MEDIA AND FAMILY PREDICTORS OF ALCOHOL USE: A COHORT STUDY OF US ADOLESCENTS

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Objective: To compare media/marketing exposures and family factors in predicting adolescent alcohol use.

Design: Cohort study.

Setting: Confidential telephone survey of adolescents in their homes.

Participants: Representative sample of 6522 U.S. adolescents, aged 10-14 years, and surveyed four times over 2 years.

Main outcome measure: Time to alcohol onset and progression to binge drinking were assessed with two survival models. Predictors were movie alcohol exposure (MAE), ownership of alcohol branded merchandise (ABM), and characteristics of the family (parent alcohol use, home availability of alcohol, parenting). Covariates included sociodemographics, peer drinking, and personality factors.

Results: Over the study period the prevalence of adolescent ever-use and binge drinking increased from 11% to 25% and from 4 to 13% respectively. At baseline, the median estimated MAE from a population of 532 movies was 4.5 hours, and 11% owned ABM at time 2. Parent alcohol use ( $\geq$  weekly) was reported by 23%, and 29% could obtain alcohol from home. Peer drinking, MAE, ABM, age, and rebelliousness were associated with both alcohol onset and progression to binge drinking. The adjusted hazard ratios for alcohol onset and binge drinking transition for high vs. low MAE exposure were 2.13 (95% confidence interval 1.76, 2.57) and 1.63 (1.20, 2.21) respectively, and MAE accounted for 28% and 20% of these transitions respectively. Characteristics of the family were associated only with alcohol onset. Conclusions: Limiting media and marketing alcohol exposures could prevent both alcohol onset and binge drinking, whereas family focused interventions would have larger impact on alcohol onset only.

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## DO WE ACT UPON WHAT WE SEE? IMMEDIATE EFFECTS OF ALCOHOL CUES ON MOVIES ON ALCOHOL CONSUMPTION OF YOUNG PEOPLE

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Population surveys have linked movie alcohol portrayals with alcohol consumption in youth. There is also experimental evidence that alcohol portrayals in movies immediately influence viewers' drinking of alcohol while watching movies. One process that might account for these immediate effects is imitation, as empirical studies have shown that individuals consume more alcohol and with a higher pace when they are with someone who consumes alcohol. This might also apply to seeing actors drinking on screen. Here we present data from two experimental studies on movie alcohol portrayals conducted with Dutch students. In the first study, a two (sex) by two (movie: alcohol or no alcohol portrayals) between-subject design was used. A total of 122 same-sex dyads (ages 18-29 years) watched the 60-minute movie clip, "What Happens in Vegas", in a semi-naturalistic home setting. Their alcohol consumption while watching was examined. Results showed that assignment to movie alcohol portrayals increased alcohol consumption during the movie for men but not for women ( $\beta = -0.650$ ,  $p = .010$ ). While controlling for weekly consumption, the effects remained significant. Identification and weekly alcohol consumption did not moderate the relation between condition and alcohol consumption. The second study examined, in a subsample of the first study, whether participants imitated actors sipping alcohol on-screen. Only participants who consumed alcohol in the alcohol condition were included (79 students: 51 males, mean age = 20.8). We assessed at what time during the movie actors and participants took a sip to match the sipping of the actors and participants. Participants were more likely to sip in accordance with the actors' sipping than without such a cue (OR = 1.50,  $p < 0.001$ , 95% CI = 1.28-1.75). Further, men were more likely to imitate actors' sipping than females (HR = 1.97,  $p = 0.003$ , 95% CI = 1.36-3.09) and participants tended to respond to actors' sipping at the beginning of the movie rather than at the end (HR = 0.80,  $p = 0.037$ , 95% CI = 0.63-0.98). Exposure to actors sipping alcohol in a movie appears to have an immediate impact on the drinking behaviour of young adult viewers, via the mechanism of imitation. Further research should determine if exposure to movie alcohol use affects drinking among underage drinkers and attitudes toward use among non-drinkers.

## CROSS-SECTIONAL ASSOCIATIONS BETWEEN MOVIE VIEWING, ALCOHOL AND CIGARETTE USE IN AMONG BRITISH ADOLESCENTS

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Our aim was to see whether exposure to alcohol use in movies was associated with alcohol consumption in a population cohort of British adolescents and to compare this association with previous research showing that increased exposure to smoking depictions in movies is associated with a higher risk of tobacco use. Information about frequency of movie viewing and alcohol consumption was collected from 5162 15-year old adolescents in the UK using a computer-assisted structured interview. Movie frequency was assessed by asking whether adolescents had seen 50 movies, randomly selected from a larger pool of popular contemporary movies. Outcome measures were initiation and current (weekly) use of alcohol. Social, family and behavioural factors were adjusted for together with peer alcohol / tobacco use.

On average, adolescents had seen 17.7 (SD 8.3) of the 50 movies asked; exposure was grouped into quartiles. In this cohort 85.7% of adolescents had tried alcohol and 21.3% of the cohort drank alcohol weekly. More frequent movie viewing was associated with a dose-response increase in alcohol use: adolescents in the highest quartile of movie viewing were 1.14 (95%CI 1.09-1.18) times more likely (adjusted risk ratio ARR) to have tried alcohol and were twice as likely to be current drinkers (ARR 2.02 (95%CI 1.66-2.46)). Frequent movie viewing is associated with a higher risk of initiating alcohol use during adolescence and also of current alcohol use, even after adjustment for social, family and individual factors. These findings are comparable to previous results for cigarette use although the pattern for each differs: by the age of 15 the majority of adolescents have tried an alcoholic drink and the higher risk of trying alcohol associated with movie viewing is weak compared to the risk of smoking onset. Conversely, for those who frequently watch movies, there is a high risk of current alcohol use at 15 despite adjustment for social, family and behavioural factors but this risk attenuates for tobacco use after adjustment for behaviour factors. These preliminary analyses suggest that alcohol depictions in movies are associated with higher levels of alcohol use in adolescence. Further work is required according to the alcohol specific content of movies before we can confirm that the relationship is as important as it is for tobacco use.

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## MOVIE ALCOHOL EXPOSURE AND ADOLESCENT ALCOHOL USE IN A MULTIETHNIC SAMPLE IN HAWAII

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Purpose: Studies on movies have been conducted primarily with Caucasian samples. This study tested the effect of movie alcohol exposure (MAE) in a multiethnic population, examining pathways for movie exposure to adolescent alcohol use suggested from previous US studies.

Methods: Research staff administered surveys to middle-school students in Honolulu, Hawaii. The sample of 836 participants (Ps), 51% female, M age 12.9 years, was 38% Asian-American, 3% Black, 5% Hispanic, 8% Filipino, 17% Native Hawaiian / Pacific Islander, and 29% White. The P was presented with 50 movie titles (drawn from a population of 500) and asked whether he/she had viewed the movie (Yes/No). Each movie was independently coded for seconds of alcohol use onscreen. The survey included covariates (e.g., parental support/monitoring, sensation seeking), mediators (alcohol expectancies, prototypes of peer alcohol users, and affiliation with peer users), and criterion measures (overall frequency of alcohol use and past-month heavy drinking).

Results: The average P had seen 17 of the movies in the list of 50 presented. In the movies he/she had viewed, the average participant saw 41 minutes of alcohol use onscreen. The zero-order correlation of MAE with adolescent use was .30 for overall use and .19 for heavy drinking. These effects were significant with control for all covariates. A structural modeling analysis was performed with MAE exogenous (including its correlations with the covariates), the three mediators endogenous (with covariances of their residual terms), and a latent construct for adolescent alcohol use as the criterion. There were significant paths (all  $p < .0001$ ) from MAE to expectancies, prototypes, and peer affiliations. Standardized paths to adolescent use were .35 ( $p < .0001$ ) for expectancies, .06 ( $p < .10$ ) for prototypes, and .44 ( $p < .0001$ ) for peer affiliations; in addition there was a direct effect from MAE to adolescent alcohol use ( $\beta = .08$ ,  $p < .01$ ). Conclusion: An effect of MAE on adolescent alcohol use was found in a diverse sample quite different from previous studies. This was mediated partly through an MAE effect on alcohol-related cognitions (more favorable expectancies and perceptions of users) and partly through a social mechanism (more affiliation with peer users). The direct effect may represent an implicit influence of movies that is not well assessed by explicit measures. We discuss implications for including media in primary prevention programs.