

## EFFECTIVENESS OF VISION IMPAIRMENT GOGGLES IN YOUTH ALCOHOL AND OTHER DRUG PREVENTION

Fatal Vision® Goggles use lenses that give the wearer a simulation of impaired driving, underage drinking, and substance use. They simulate the behaviors of individuals impaired by alcohol or other substances such as THC and Opioids. They are intended to educate participants about the consequences of alcohol or other drug impairment, change attitudes, and reduce drunk and drugged driving behavior. The effects are usually demonstrated to a large audience while one or more audience members wear the goggles and perform tasks such as sobriety tests.

While Fatal Vision® Goggles may be the most well-known brand, similar visual alcohol and drug impairment simulation devices are manufactured and marketed under other names, including:

- Drunk & Dangerous Glasses
- D.W. Eyes Goggles
- Drunk Busters Goggles
- Various generic brands

While prevention workers have focused their efforts on approaches with evidence of effectiveness, it sometimes remains challenging to explain to coworkers and community partners why the field of substance use prevention supports some tactics and discourages others. In response to this need, this publication summarizes the research on the effectiveness of FVG.

### THE RESEARCH

There is limited research and evidence of FVG effectiveness in changing attitudes or reducing drunk driving.

A review of the research shows:

- No evidence base supports Fatal Vision® Goggles' effect on youth or adolescents. Three of the studies reviewed used college students, and the findings cannot be generalized to the 10-17 age group.
- While participants who wear the goggles report greater declines in accepting attitudes toward drinking and driving compared to the audience, these differences disappear within four weeks. (Jewell & Hupp, 2005)
- Evidence indicates that FVG has the potential to change drinking and driving attitudes only. (Hennessy, Lanni-Manley and Maiorana, 2006) Changes in attitude are not accompanied by a decrease in drunk driving. (Jewell & Hupp, 2005)

- One study (Hennessy, Lanni-Manley, and Maiorana, 2006) examined how past experiences, personal attitudes, personality, and future expectations influenced the effectiveness of FVG in reducing drinking and driving attitudes. The findings related to personal characteristics are:
  - FVG is more effective with those who consume more alcohol.
  - FVG is more effective with those who believe there is a greater risk of collision when drinking and driving.
  - FVG is less effective with those who gain a strong sense of identity from their driving.
- The effect of FVG on attitudes, as shown in the three studies, is minimal to moderate in the short term.
- When interventions using FVG were implemented with middle school students, researchers found no significant change in participants' attitudes towards drinking and driving, suggesting attitude change is more likely to happen when the intervention is aimed at an older population. (Morales and Day, 2017)

## RESEARCH HIGHLIGHTS

Four studies provide the basis of research findings on the effectiveness of Fatal Vision® Goggles. The first study (Jewell, Hupp, and Luttrell, 2004) documents immediate attitude change differences between participants who wore the goggles and performed sobriety tests and those who only observed the wearers. The second study (Jewell & Hupp 2005) researched longer-term attitude and behavior change. The third study (Hennessy, Lanni-Manley, and Maiorana, 2006) used the goggles, sobriety tests and a driving simulator with participants. It tested several hypotheses regarding participants' attitudes, perceptions, typical drinking behavior, and personality characteristics. The fourth study (Morales and Day, 2017) tested middle school students' attitudes utilizing pre and post-tests following a pedal go-cart driving course incorporating FVG.

The body of evidence listed below includes research findings specific to using Fatal Vision® Goggles.

### Fatal Vision® Goggle Effects on Youth

- No evidence base supports Fatal Vision® Goggles' effect on youth or adolescents.
- Three of the studies reviewed in this paper used college students in their research and the evidence of effectiveness is generally limited to young adults.
- Participants in the 2004 study had a mean age of 20.6 years, and approximately half were first-year college students. About one-fourth (22%) were at or above the legal age limit of the state where the study was conducted (21).
- Participants in the 2005 study had a mean age of 19.5 years, and approximately half were first-year college students. (Jewell & Hupp, 2005)

- Participants in the 2006 study were at least 18 years of age, and their mean age was about 20.5 years. The age range in this study was 18-33 years. All participants held a valid license and drove on a daily basis. (Hennessy, Lanni-Manley and Maiorana, 2006)
- Participants in the 2017 study were 61 middle school students who operated a pedal go-kart on a driving course incorporating Fatal Vision® Goggles. (Morales and Day, 2017)

## Participant vs. Observer Effects

- "...Fatal Vision® Goggles are moderately effective at reducing favorable attitudes toward drinking and driving, at least in the short term. However, there is an important caveat revealed in these results. Simply stated, this prevention tool is significantly more effective if it is actually experienced by the individual. As previously mentioned, many agencies using the Fatal Vision® Goggles select a few individuals to wear the goggles while a large audience watches." (Jewell, Hupp, and Luttrell, 2004)
- "These results specify that the experiential effects of the goggles are significantly greater than the onlooker effects. In fact, onlooker effects were no different than if the participant had simply watched a short five-minute video. Those individuals and agencies that utilize this tool should consider allowing the full number of participants in these prevention programs to wear the goggles rather than simply watching a demonstration passively." "...allowing more (or all) of prevention program participants to actually wear the goggles would cost agencies or school (sic) in terms of time and money." "However it seems clear that using these goggles in front of a very large, and mostly passive, audience is not the most effective way to use this prevention program component." (Jewell, Hupp, and Luttrell, 2004)

## Duration of Effects

- "... this study only measured the very short-term effects of this prevention tool. It is currently unknown whether these effects will be maintained." (Jewell, Hupp, and Luttrell, 2004)
- "...while the Fatal Vision® Goggles are effective in changing immediate attitudes when they are actually worn, this attitudinal change disappears within four weeks. (Jewell and Hupp, 2005)
- "Results indicated that middle school participants' attitudes towards drinking and driving did not change significantly from pre-test to post-test." (Morales and Day, 2017)

## Attitude and Personal Characteristics

- One study (Hennessy, Lanni-Manley, and Maiorana, 2006) examined how past experiences, personal attitudes, personality, and future expectations influenced the effectiveness of FVG in reducing drinking and driving attitudes. This study had all participants wear the FVG while performing field sobriety tests and driving in a traffic simulator; there were no 'audience' participants. Findings related to the personal characteristics examined in this study are noted below:
  - Participants who consume more alcohol during the average outing showed greater reduction in intentions to drink and drive following the use of FVG.
  - Participants who perceived a greater risk of getting caught by the police did not show greater reduction in drinking and driving intentions following the use of FVG.
  - Participants who perceived a greater risk of collision when drinking and driving showed greater reduction in drinking and driving intentions following the use of FVG.
  - Participants rated as 'high identity drivers' were impacted less by the use of FVG. In explanation, some drivers drive to express their persona and gain a sense of identity from driving. For 'high identity drivers,' driving demonstrates greater personal meaning and relevance. "Attempts to alter this freedom...may lead to resistance and oppositions because it would represent a threat to their underlying motive for driving."

## Attitude and Behavior Change

- While other research correlates attitude and actual behavior change in prevention programs, none of the studies reviewed provides direct evidence for this correlation specific to Fatal Vision® Goggles.
- "These results indicate that wearing the Fatal Vision® Goggles, or watching others wear the goggles, had no significant effect on actual drinking and driving behaviors in the four weeks after their implementation." (Jewell & Hupp, 2005)
- "... this study measured the effects of the Fatal Vision® Goggles on attitudes toward drinking and driving, not drinking and driving behavior itself. With this being said, research has shown attitudes toward risky behavior are highly related to the behavior itself (Donavan, Marlatt & Salzberg, 1983) and that altering individual preferences toward drinking and driving have been found to be one of the most effective strategies toward changing the actual behavior (Mannering, Bottiger & Black, 1987)." (Jewell, Hupp and Luttrell, 2004)
- "...the change in attitude was not accompanied by a similar decrease in drunk driving behaviors." (Jewell & Hupp, 2005)
- "...evidence from the present study should be taken as an indication of the potential for FVG to change drinking and driving attitudes only." (Hennessy, Lanni-Manley, and Maiorana, 2006)

## CONCLUSIONS AND RESOURCES

Given the increased amount of recent applicable theory and research in our field and limited resources, prevention workers have a responsibility to primarily use prevention strategies that are proven to prevent and reduce youth alcohol or other substance misuse and related consequences. To create positive change within our communities, we must apply best practices and promote evidence-based prevention.

While FVG has shown some evidence of effectiveness in shifting college students' attitudes short term, no evidence exists for the 10-17 age group. Fatal vision goggles have been found ineffective in producing lasting behavior change, with any shifts in attitudes towards impaired driving proving temporary. The absence of significant knowledge or behavior change suggests that FVG's are ineffective in preventing future alcohol and other drug use and, by extension, impaired driving.

To learn more about what does or does not work in substance use prevention, please visit:

- [Focus on Prevention. Strategies and Programs to Prevent Substance Use](#) (SAMHSA)
- [What Research Shows Does Not Work In Substance Misuse Prevention](#) (PTTC)

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