

Effectiveness of Fatal Vision® Goggles in Youth Alcohol, Tobacco and Other Drug (ATOD) Prevention

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This document was developed to provide a summary of the research regarding the effectiveness of the use of Fatal Vision® Goggles in the substance abuse prevention field. Suggested citation: Prevention First (2010). *Effectiveness of Fatal Vision® Goggles in Youth Alcohol, Tobacco and Other Drug (ATOD) Prevention*. Springfield, IL: Prevention First.



Executive Summary

Fatal Vision® Goggles (FVG) are intended to educate participants about the consequences of alcohol impairment. The goggles are used as a preventative method to change attitudes and reduce drunk driving behavior. Fatal Vision® Goggles simulate alcohol impairment and 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.

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. The three studies reviewed in this paper used college students and the findings cannot be generalized to the 10-17 age group.
- When used with most participants observing as part of an audience, FVG are no more effective than watching a five-minute anti-drunk driving video. (*Jewell, Hupp and Luttrell, 2004*) (*Jewell & Hupp, 2005*)
- 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 expectation influenced the effectiveness of FVG in reducing drinking and driving attitudes. The findings related to personal characteristics are:
 - FVG is more effective with those that consume more alcohol.
 - FVG is more effective with those that 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.

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

Fatal Vision® Goggles Product

Fatal Vision® Goggles (FVG) are intended to educate participants in community prevention programs about the consequences of alcohol impairment. Law enforcement officers often facilitate Fatal Vision® Goggles activities with the intention of changing attitudes about drinking and driving, and therefore, reducing drunk driving behavior.

Fatal Vision® Goggles use lenses that give the wearer a simulation of impairment. Fatal Vision® Goggles are available in different impairment levels and are available in a clear or shaded version to simulate either daytime or nighttime conditions. One of the popular activities usually conducted with Fatal Vision® is to perform Standard Field Sobriety Tests such as walking a straight line. Because the goggles cause a loss of balance and equilibrium, the effect of wearing them mimics impairment due to alcohol and other drugs. (*Innocorp, Ltd., 2010*)

In addition to sobriety tests, other activities used in conjunction with impairment goggles include driving/traffic simulators and actual driving of battery or pedal-powered go-karts and golf carts. Battery powered karts may be equipped with remote kill switches to stop their operation and ensure the safety of participants operating them while simulating impairment.

“The Goggles are often used with large groups, the majority of students often only observe the effects of the Goggles on another student without actually wearing the Goggles themselves.” (*Jewell, Hupp and Luttrell, 2004*)

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
- Drunk & Disorderly Goggles (U.K.)

Research Highlights

Three 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, and tested several hypotheses regarding participants' attitudes, perceptions, typical drinking behavior and personality characteristics.

The body of evidence listed below includes research findings that are specific to the use of Fatal Vision® Goggles.

Fatal Vision® Goggle Effects on Youth

- No evidence base supports Fatal Vision® Goggles' effect on youth or adolescents. The findings in these studies cannot be generalized to the 10-17 age group. However, "This prevention tool is often used with adolescents in high school and younger. Adolescents are unique... it is possible that the effect of this prevention tool would be different for this population." (*Jewell, Hupp and Luttrell, 2004*)
- The three 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 college freshman. About one-fourth (22%) were at or above the legal age limit of the state in which the study was conducted (21).
- Participants in the 2005 study had a mean age of 19.5 years, and approximately half were college freshman. (*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*)

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 & Hupp, 2005*)

Attitude and Personal Characteristics

- One study (*Hennessy, Lanni-Manley and Maiorana, 2006*) examined how past experiences, personal attitudes, personality and future expectation 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 that consume more alcohol during the average outing showed greater reduction in intentions to drink and drive following the use of FVG.
 - Participants that 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 that 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

Given the increased amount of recent applicable theory and research in our field and limited resources, as prevention workers we have a responsibility to primarily use those prevention strategies that are proven to prevent and reduce youth alcohol use and related consequences, as well as other substance use. In order 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 changing college students' attitudes short term, no evidence exists for the 10-17 age group. There is no evidence of FVG leading to long-term attitude change beyond four weeks and no evidence of drinking and driving behavior change.

Further, many commercially available programs such as Fatal Vision are quite costly. For example, the price of a single Fatal Vision “starter kit,” which includes six types of goggles of varying strengths and tints, video and handouts, is currently \$875. Therefore, it is critical for agencies and schools, which have limited budgets for such activities, to spend these funds wisely and in a way that will have the most benefit. (Jewell & Hupp, 2005) (Note: Starter Kit price as of July 2010 was \$1,060.00. Source: Innocorp, Ltd., Spring 2010 Catalog.)

FVG does not meet the criteria to qualify as an evidence-based practice; however, it does not appear to violate the standards of best practices. FVG may be useful as one component of (or a supplement to) a comprehensive prevention program. It should not be used as a single prevention event that is not part of an ongoing prevention effort.

References

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