



# Risk Factors for Driving-related Anger across Gender and Age

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## Background

Driving anger constitutes a significant risk factor for road rage and traffic accidents. This association makes the identification of *malleable* risk factors for driving-anger of particular importance. Moreover, as aggressive driving is notably distinguished in terms of both *gender* and *age*, such research needs also to take these factors into account.

## Sample

The sample included 1,217 drivers identified by the Washington State Department of Licensing. In 2001, participants were recruited from a pool identified as either *high risk drivers* (55%) or a matched sample from the *general driving population* of WA state. For this study, the two samples were merged.

## Variables

### Alcohol Use Predictors:

- ❖ Frequency of Consuming a Drink
  - ❖ Number of Drinks Consumed on a Typical Drinking Day
  - ❖ Frequency of Consuming 6 or More Drinks on One Occasion
- [These three items were summed to create a single measure of alcohol use]

### Psychological Predictors:

- ❖ *Dysphoria*
- ❖ *General irritability*
- ❖ *Explosive anger*
- ❖ *Sensation seeking*
- ❖ *Restlessness*



### Outcome:

- ❖ Driving Anger

## Measures

❖ Alcohol Use Disorders Identification Test (AUDIT; Babor et al., 1989; Saunders et al., 1993). The three consumption items of the AUDIT (AUDIT-C) served as the alcohol predictors. It is designed to screen for hazardous and harmful drinking patterns and each item is scored on a 5-point scale (0 to 4).

❖ Research Institute on Addictions Self Inventory (RIASI; Nochajski and Miller, 1995) was the source of the psychological predictors. The RIASI is a 49-item instrument, developed as a brief screen to identify individuals who might require a more thorough diagnostic assessment for an alcohol-use disorder and as a potential predictor of subsequent DUI recidivism. It consists of 41 true-false items and 8 items in which the respondent fills in the frequency or quantity of certain behaviors or events.

❖ Driving Anger Scale, Long Form (DAS; Deffenbacher et al., 1994) served as the outcome measure. Ratings are based on how much anger a driving situation would elicit if it happened to the person (e.g., "someone cuts in front of you on the freeway"). Response choices vary from 1 (not at all) to 5 (very much). High scores on the DAS are associated with higher general trait anger, impulsiveness, and trait anxiety (Deffenbacher et al., 1994).

## Method

Four hierarchical linear regressions predicting driving anger were conducted separately across gender and age (above and below/equal to the mean of 32), each controlling for risk group, age or gender, and stressful life events.

### Tables 1 & 2. Risk Factors for Driving Anger: Separated by Gender

Males				Females			
Predictors	Beta	Standard Error	P-Value	Predictors	Beta	Standard Error	P-Value
Dysphoria	1.448	.613	.018	Dysphoria	2.899	.832	.011
Restlessness	-1.714	1.849	.354	Restlessness	5.533	2.683	.023
General Irritability	5.173	1.936	.008	General Irritability	4.400	2.668	.049
Explosive Anger	8.139	2.659	.002	Explosive Anger	2.231	4.353	.493
Sensation Seeking	4.786	1.795	.008	Sensation Seeking	5.752	2.996	.049
Alcohol Use	.517	.262	.049	Alcohol Use	.833	.454	.056

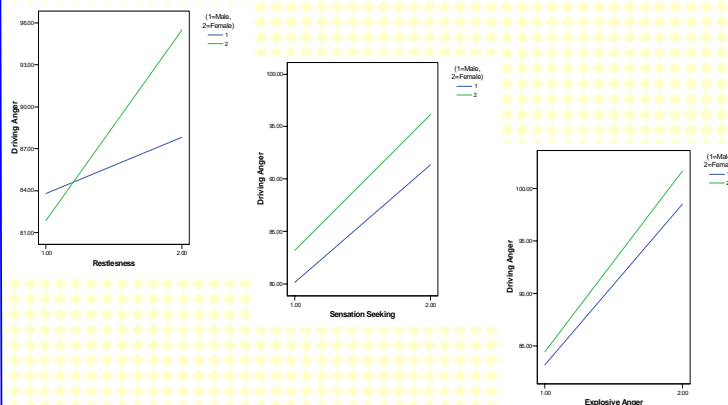
Note: Both Models Control for Driving Risk Group, Age, and Stressful Life Events

### Tables 2 & 3. Risk Factors for Driving Anger: Separated by Age Group

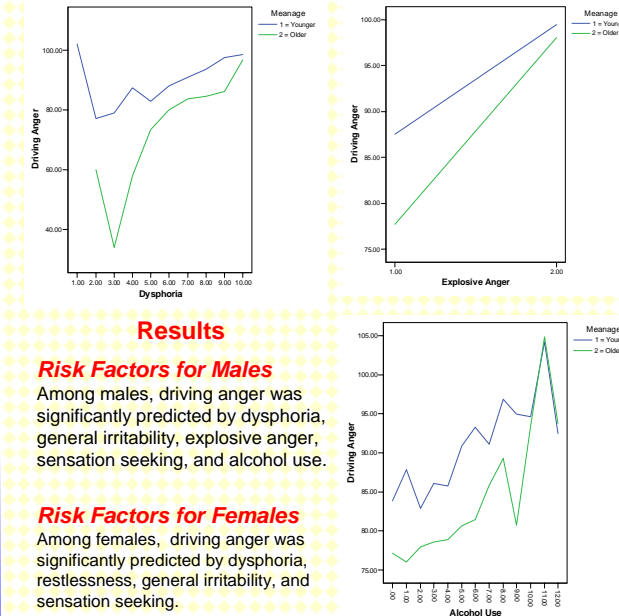
Younger Group				Older Group			
Predictors	Beta	Standard Error	P-Value	Predictors	Beta	Standard Error	P-Value
Dysphoria	1.996	.606	.001	Dysphoria	2.060	.856	.017
Restlessness	1.777	1.897	.349	Restlessness	-1.117	2.602	.668
General Irritability	4.348	1.938	.025	General Irritability	5.230	2.706	.054
Explosive Anger	4.965	2.750	.071	Explosive Anger	9.994	4.127	.016
Sensation Seeking	5.018	1.866	.007	Sensation Seeking	6.526	2.728	.017
Alcohol Use	.652	.290	.025	Alcohol Use	.587	.367	.111

Note: Both Models Control for Driving Risk Group, Gender, and Stressful Life Events

### Figures 1, 2 & 3. Risk Factors for Driving Anger by Gender



### Figures 4, 5 & 6. Risk Factors for Driving Anger by Age Group



## Results

### Risk Factors for Males

Among males, driving anger was significantly predicted by dysphoria, general irritability, explosive anger, sensation seeking, and alcohol use.

### Risk Factors for Females

Among females, driving anger was significantly predicted by dysphoria, restlessness, general irritability, and sensation seeking.

### Risk Factors for the Younger Group

Among those age 32 and under, driving anger was significantly predicted by dysphoria, general irritability, sensation seeking, and alcohol use.

### Results: Risk Factors for the Older Group

Among those over age 32, driving anger was significantly predicted by dysphoria, explosive anger, and sensation seeking

## Discussion and Implications

This sample of WA state drivers are distinguished in terms of their driving anger in several important ways:

- ❖ Younger males appear to be most influenced by their *alcohol use*, although young females are not far behind.
- ❖ *Explosive anger* only represents a significant risk factor for males, regardless of age group.
- ❖ *Restlessness* only acts as a significant risk factor for females.
- ❖ Both *dysphoria* and *sensation seeking* represent significant risk factors for driving anger, regardless of gender OR age group.
- ❖ These findings highlight the importance of driving-anger related prevention programs that are tailored toward the specific needs of individual participants, with particular emphasis on gender and age. Additionally, the robust nature of both *dysphoria* and *sensation seeking* in predicting driving anger across the sample suggests that risk factors for driving anger may present as both internalizing and externalizing behaviors for both males and females alike.



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