



# Riding SMART!

A Publication of the **Skilled Motorcyclist Association-Responsible, Trained & Educated Riders, Inc.** · Vol. 13, No. 2 · March/April 2019

## SMARTER Officers

**Chair**  
Rich Henrion

**President**  
Dan Petterson, Ed.D.

**Vice-Chair**  
Don Smith, Ph.D.

**Secretary**  
Scott Shoup

**Treasurer**  
Sean Duperron

**Directors**  
Jason Bradford  
Eugene Pratt II

## Contact Us

### Mailing Address

P.O. Box 121  
Scottville, MI 49454

### E-mail Addresses

info@smarter-usa.org  
smarterusa@gmail.com

### On the Web

www.smarter-usa.org

## Join SMARTER

### Individual dues

\$25/annually  
\$65/3 years

### Joint-members dues (2-person household)

\$35/annually  
\$90/3 years

### Organizational dues

\$100/annually

## President's News & Views

### SPECIAL EDITION THE RIDER TRAINING RESEARCH

This is a special edition of *Riding Smart* which focuses on the research regarding the effectiveness of rider training.

**SPECIAL  
EDITION**

Developing this special edition has been on my mind for some time but I have been hesitant to share this because the research is so counterintuitive and I expect it to challenge the thinking of the dedicated group of individuals involved in rider training. The research evidence simply does not support the common assumption that trained riders are safer riders – that trained riders are less likely to be involved in a crash.

To be clear, I am not thinking riders should not be trained. My 30 years as an MSF RiderCoach and RiderCoach Trainer and a contributor to the development of several MSF courses and course revisions hopefully demonstrates my belief in the importance of being a trained rider. The fact, however, is that the rider training most believe is designed to make new motorcyclists safer is not decreasing the number crashes.

The research conclusions are compelling. Only when we acknowledge that the current training regimes are not having the result we intend, can we move forward to finding and implementing fixes.

Dan

There is a world of  
difference between  
knowing what to do and  
actually doing it

Bill Phillips

### Riding Smart Preview

The Research on Rider Training	___ 2-4
Possible reasons why traditional training doesn't work	_____ 5
Possible fixes for rider training	_____ 5
Thinking about and re-thinking rider training	_____ 6



Continued from page 2.

In 1990 he presented a paper at the International Motorcycle Safety Conference titled *Lane Position for Collision Avoidance: an Hypothesis*, in which he noted, “lane positioning as the rider approaches a potentially threatening situation is a simpler, more reliable and more effective means of reducing collision risk than reliance on emergency braking.”

His study revealed that “the motorcycle rider can do more to avoid a collision by moving laterally away from a threatening vehicle, putting at least one lane-width between them, before a vehicle begins to violate his right-of-way, than he can be effective braking after the other vehicle has begun to violate his right-of-way.”

In 2006 he and a fellow researcher published *Rider Training and Collision Avoidance in Thailand and Los Angeles Motorcycle Crashes*. The report abstract states:

*Both the Thailand and Hurt studies concur that the time from the precipitating event that begins the collision sequence to the impact itself is so short – less than three seconds in the great majority of cases – that even a well-chosen, well-executed evasive action is unlikely to be effective. This suggests that rider training should emphasize teaching riders the knowledge and skills needed to prevent a precipitating event from occurring, rather than how to react after it has already occurred.*

(Underlining added)

### **The Billheimer study - 1998**

The most well-known effort to evaluate the effectiveness of rider training may be *Evaluation of the California Motorcycle Safety Program* by John W. Billheimer, conducted in 1998. This research indicated that for the first six months after training, novice riders with less than 500 miles of prior experience experienced fewer crashes than their matched-pair untrained riders. This is a positive impact of the training. However, beyond six months, riding experience begins to have a leveling effect on the differences between the two groups. Further, in the case of riders with more than 500 miles of experience prior to training or interviewing, no significant differences in accident rates were detected between the two groups, either before or after riders took the basic training course. In addition, there was no evidence that riders electing to enter a safety course voluntarily rode any more safely than their untrained counterparts before taking training.

The results of this research are similar to the results of other research that would be conducted in the following years - providing little or no evidence to support the common assumption that trained riders have fewer crashes.

### **Research – 2000 to 2010**

The 1990 Ouellet report, the Billheimer study and the 2006 Ouellet research should have stimulated changes in rider training curriculum design or at least a public recognition by training advocates that training is good at teaching people how to ride but that knowing how to ride does not equate to being a safe rider. The common assumption that rider training in physical operating skills is an effective countermeasure for reducing crash risk continued even the face of the evolving evidence to the contrary.



*Effectiveness of Motorcycle Training and Motorcyclists' Risk-Taking Behavior* published in 2007 showed that those individuals who took beginning rider training courses were more likely to be involved in an accident than those who did not and that those who took the beginning course more than once were much more likely to be involved in an accident.

A 2009 review of the literature titled *Effectiveness of Motorcycle Training and Licensing* found no consensus in the literature for the common assumption that trained motorcyclists have fewer crashes.

Continued on page 4.

Continued from page 3.

Also in 2009 researchers at the Highway Loss Data Institute (HLDI) analyzed motorcycle claims under collision coverage to see if crash risk is lower in states that require training for riders younger than 21, compared with states that don't require any training (*Motorcycle Collision Coverage Claims in States with Required Motorcycle Rider Training*). The main finding is that the frequency of insurance collision claims for riders this age is 10 percent higher, not lower, where training is required. Although this difference isn't statistically significant, it contradicts the notion that motorcycle training courses reduce crashes.

A more substantial review of the literature was conducted in 2010. The review by the Cochran Collaboration (*Motorcycle Rider Training for Preventing Road Traffic Crashes*) of 23 research studies that report an evaluation of the effectiveness of motorcycle rider courses in reducing the number of traffic offences, motorcycle rider crashes, or injuries and deaths concluded that due to the poor quality of studies identified, the researchers were unable to draw any conclusions about the effectiveness of rider training on crash, injury, or offence rates.

### Summary of research to 2010

There was substantial evidence available up to and including 2010 that rider training was not an effective measure for reducing crash risk. While the early studies varied in methods and rigor of their evaluation methodology resulting in the possibility the results were more a reflection of the methods used to evaluate the training than the effectiveness of training itself, the evidence between 2000 and 2010 was stacked against the effectiveness of training. Even in the face of the mounting evidence, states continued to fund rider training in the hopes of reducing crash rates.



### Recent Evidence – traditional training content

The most recent evidence SMARTER has located regarding the effectiveness (lack of) of a traditional type of rider training was published in a 2015 study titled *Does an On-road Motorcycle Coaching Program Reduce Crashes in Novice Riders? A Randomized Control Trial*. This study aimed to determine the effectiveness of a program called “VicRide” in reducing crash involvement for novice motorcycle riders in Victoria, Australia. Consistent with the majority of previous research, there was no evidence that this on-road motorcycle rider coaching program reduced the risk of crashing. Research actually found an increase in crash-related risk factors for trained riders.

### Recent Evidence – changed content of training

A 2014 study titled on our website as “*Evaluation of Advanced Training Course for Motorcyclists - RISK*” provides evidence that rider training focused on teaching motorcyclists to recognize, analyze, and anticipate potential traffic hazards has a positive effect on safe riding behaviors. However, this study could not establish whether this type of training course indeed reduces the risk of crashes. A decade after Ouellet suggested that “rider training should emphasize teaching riders the knowledge and skills needed to prevent a precipitating event from occurring, rather than how to react after it has already occurred,” this research provides support for the validity of that suggestion.

### Recent Evidence – changed content and method of delivery of training

“*The Effect of Sight Distance Training on the Visual Scanning of Motorcycle Riders: A Preliminary Look*” was published in 2013. The type of training evaluated in this study was not the typical type of operational skills training. The findings of this study suggest that training and feedback on sight distance may relate positively to sight distance behavior on the road.

Research which assessed the impact of experience and advanced training on rider behavior using a motorcycle simulator was reported in a 2014 study titled “*The Role of Experience and Advanced Training on Performance in a Motorcycle Simulator*.” The results suggested that experience and advanced training lead to changes in behavior compared to novice riders which can be interpreted as having a potentially positive impact on road safety.



## Some possible reasons for why traditional training doesn't work to reduce crash risk

The research advances several hypotheses to explain why rider training might be ineffective at reducing the risk of crashing.

(1) The most compelling of the reasons for the lack of effectiveness of rider training for reducing crash risk is that training focuses too much on operational skills and not enough on the cognitive, perceptual, judgment and decision making skills that are associated with not crashing or not getting into situations where there is an elevated likelihood of crashing. While the most recent versions of state sponsored rider training allocate more time toward these subjects than did the curricula of the previous decades, the balance is still heavily in favor of operational skills.

(2) A second hypothesis for training ineffectiveness is that the psychological characteristics of trainees are not sufficiently taken into account. Most crashes are not due to a lack of driving skills but to deliberate behavior. Anyone who has ever spent time riding track days has had the experience of observing a rider and saying to oneself "he/she is going to crash" when an obviously physically skilled rider seems to be pushing the limits and failing to make responsible decisions. The same applies to a rider who crashes on the public roads – a rider who has adequate or better operational skills but makes poor decisions and judgments.

(3) Another hypothesis is that training may tend to increase motorcyclists' self-confidence and not their ability to make good judgments. It is the "risk-offset" idea expressed in the Motorcycle Safety Foundation curriculum. To be safe, riding skill must always exceed the level of risk taken. Riders may learn, for example, skills which allow them to take curves at a higher rate of speed and then misjudge their actual skill level or fail to take into consideration the many additional factors that might arise on the street.

(4) A fourth reason put forth in the research is that the training tempo is just too intense to allow the internalization and the retention of the acquired skills. Many basic training courses are designed for 15 - 20 hours and are often conducted in a 2 or 3 day weekend. To be expected to progress from never riding a motorcycle to a person fully eligible to ride any motorcycle in any situation is just too much to learn and retain in a short crammed full weekend. Most novice riders in a training course are fully focused on learning to ride the machine and the stuff about judgment, responsibility and decision making might never be internalized.

## Some possible fixes for rider training

In general, the research would indicate rider training could be improved by making the focus of the content of the training the mental skills of safe riding. Specifically, rider training might be improved by:

1. Increasing the focus and time dedicated to hazard perception
2. Increasing focus on attitudes to risk-taking, decision making, judgment and responsibility
3. Teaching respect for, and the importance of, following laws and understanding the danger of riding a motorcycle on the public roadways
4. Riding hyper alert and never ride impaired and to understand that good judgment sometimes means choosing not to ride
5. Keeping public roads free of aggressive recreational riding. There are appropriate options for on-track and off-road recreational riding.
6. Designing training programs that offer a progression to on-road riding and developing riding in traffic skills through on-road experience in a range of situations.
7. Providing mentoring experiences pairing experienced, responsible riders with beginning riders
8. Using simulators for hazard perception or situational awareness training

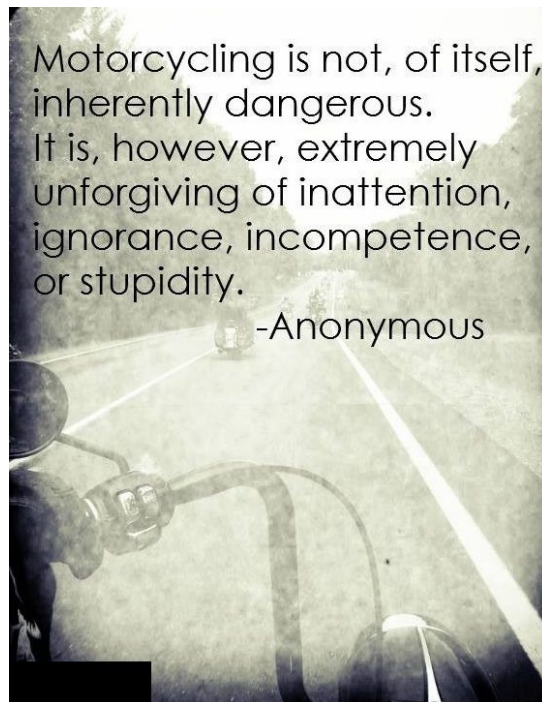




### Riding Smart Special Editions

This is the 7th special edition of Riding Smart. Previous special editions include:

- September/October 2014 - Helmet research
- March/April 2016 - Debunking the Myths about Helmets and Helmet Laws
- January/February 2018 - Countermeasures that work – review of the research
- March/April 2018 - Conspicuity
- May/June 2018 - Pelvic Injury
- September/October 2018 - Neck injury



**SMARTER has a public Facebook Group:**  
<https://www.facebook.com/groups/192085967504606/>



Join today to stay current on the latest news, research and events.



Donations from all sources are the lifeblood of SMARTER. Without financial support, SMARTER could not exist. SMARTER worked hard to become recognized as a 501(c)(3) tax exempt public charity, and all donations are deductible to the full extent allowed by law.



*Please consider donating to SMARTER. Enclose this form with your check payable to SMARTER Inc. and mail to the address provided. Your contribution is tax deductible as allowed by law, and your support is greatly appreciated!*

Skilled Motorcyclist Association—Responsible, Trained & Educated Riders, Inc.  
 SMARTER • P.O. Box 121 • Scottville, MI 49454-0121  
[www.smarter-usa.org](http://www.smarter-usa.org) • [info@smarter-usa.org](mailto:info@smarter-usa.org)



*All the Gear All the Time!*



I want to help. Enclosed is my donation for \$ \_\_\_\_\_

I understand no goods or services will be received in exchange for my contribution.

SMARTER is a nonprofit, tax-exempt public charity under Section 501(c)(3) of the Internal Revenue Code. Your donation is tax deductible as allowed by law. Please allow 30 days for acknowledgement and receipt.