

Effectiveness of Motorcycle Protective Clothing: Riders' Health Outcomes in the Six Months Following a Crash. 2012

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<http://www.injuryjournal.com/article/S0020-1383%2811%2900518-3/abstract>

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Abstract

Background

Little is known about the contribution of protective clothing worn in motorcycle crashes to subsequent health-related outcomes, impairment and quality of life.

Methods

A prospective cohort of 212 adult motorcyclists were recruited following presentations to hospitals or crash repair services in a defined geographic area in Australia between June 2008 and July 2009. Data was obtained from participant interviews and medical records at baseline, then by mailed survey two and six months post-crash (n = 146, 69%). The exposure factor was usage of protective clothing classified as full protection (motorcycle jacket and pants), partial protection (motorcycle jacket) and unprotected (neither). Outcomes of interest included general health status (Short Form SF-36), disability (Health Assessment Questionnaire) treatment and recovery progress, quality of life and return to work in the six months post-crash.

Odds ratios (OR) were estimated for categorical outcomes using multiple logistic regression to assess differences in outcomes associated with levels of protection adjusted for potential confounders including age, sex, occupation, speed and type of impact. Non-parametric procedures were used for data that was not normally distributed.

Results

Compared to unprotected riders, both fully and partially protected riders had fewer days in hospital and reported less pain immediately post-crash; at two months both protection groups were less likely to have disabilities or reductions in physical function. By six months there were no significant differences in disability or physical function between groups, but both protection groups were more likely to be fully recovered and returned to pre-crash work than unprotected riders. Fully protected riders achieved better outcomes than either partially or unprotected riders on most measures. There were few significant differences between the full and partial protection groups although the latter showed greater impairment in physical health two months post-crash.

Conclusions

We found strong associations between use of protective clothing and mitigation of the consequences of injury in terms of post-crash health and well-being. Given this evidence it seems likely that the use of protective clothing will confer significant benefits to riders in the event of a crash.