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Behavior of bicyclists on the roads of Al Ain City, UAE: A prospective observational study

Introduction:

Severe head injuries of bicyclists when hit by cars have high morbidity and mortality. Bicycle helmets reduce the severity of head injuries. The overall compliance of bicycle helmets varies depending on helmet use legislation. Previous study in Al Ain (2004) reported that only 0.5% of bicyclists used helmets, many of them were driving against traffic and did not use the lights at night.

Aims:

We directly observed the behavior of bicyclists on the roads of Al Ain City aiming to assess the level of safety of cycling.

Subjects and methods:

We developed and used a structured data collection form. We divided Al Ain City to sectors and randomly selected different sectors, times during week and day in order to cover the whole City. We observed bicyclists without direct contact or interview. Data were entered into Excel Sheet and analyzed using SPSS.

Results:

We observed 1129 bicyclists, 97.6% were males, 27.6% were cycling against the traffic, 39.3% at night and 96.8% of them were not using lights. Only 2.1% of the cyclists used helmets (n=24). Female cyclists significantly used helmets compared with males (25.9% vs 1.5%; $p<0.001$, Fisher's Exact test). Most riders were cycling on Saturdays and on Sundays. 39.4% were cycling on main roads with high traffic, 31% on the residential roads, 20.9% on sidewalks and 7% at pedestrian crossings.

Conclusions:

Unsafe behavior of bicyclists in Al Ain City persists with low use of helmets and often driving at night without proper lights necessitates the intervention aiming on raising awareness and enforcement of legislation.