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**Traumatic Brain Injury and Substance Use In A Prison Population:
Lifetime Prevalence Rates and Neuropsychological Sequelae**

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Abstract

The present study investigated the rates of traumatic brain injury (TBI) and substance use in a prison population, and the effect of these on neuropsychological functioning. The study was conducted in two parts. In the first part, responses to a screening questionnaire indicated that 86.4% of the 118 subjects had sustained TBI, 56.7% reported more than one TBI, and Maori subjects sustained 12 % more TBI than non-Maori. Subjects reported higher rates of illicit substance use than the general population, and Maori reported higher substance use than non-Maori. All subjects reported difficulties with general memory and socialisation on a Problem Rating Scale, but no differences were found in the level of difficulties reported due to severity of TBI sustained. Subjects with more severe substance use histories reported experiencing most problems with interpersonal relationships, family, and finances.

In part two, 50 subjects from the original sample with a history of TBI and/or substance use, completed neuropsychological measures of short and long term verbal and visual memory, learning, information processing, motor speed and co-ordination, executive functioning, and malingering. All subjects performed below norms on tests of verbal memory and verbal abstract thinking, but overall, no differences were found due to either severity of TBI or level of substance use. Maori subjects obtained the lowest scores on tests of verbal ability, but also reported higher rates of TBI and substance use, which is presumed to account for this result. In conclusion, prison populations seem to have a disproportionately high TBI rate, recurrent TBI rate, and substance use rate, compared to the general population. Further, there are a group of individuals who have experienced both TBI and substance abuse, and consequently have impairments in verbal memory and learning, abstract thinking, and report problems with general memory and socialisation. These difficulties should be taken into account, since they may affect functioning both in prison and following release.

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