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# Prevalence of Huntington Disease in Asia, systematic review and meta-analysis

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**Introduction:** The epidemiological studies on Huntington's disease (HD) suggest that prevalence rates in the Asian population are significantly lower than the western population. Our systematic review of epidemiological data of HD prevalence in Asia has highlighted the level of impact of HD on the Asian population and limitations for HD genetic testing. \

**Methods:** Original articles and reviews about HD prevalence in the Asian population were found through databases such as EMBASE, Medline, and Psych Info. Relevant articles were analyzed with the scrutiny of references, including specific keywords. A meta-analysis was performed on prevalence rates to find the degree of similarities with I2. Point Prevalence was measured as the number of people affected by HD on 100,000 population and expressed as Point Prevalence (PP) = Number of people affected/100,000 with 95% Confidence Intervals (CI95).

**Results:** Results from random-effect meta-analysis show the highest point prevalence of HD in Middle East with PP=4.0 (CI95=2.90□-5.30). The lowest point prevalence was found in the Chinese population with PP = 0.25 (CI95 = 0.16□0.36). Europe remains at a high prevalence compared to Asian countries with PP = 1.00 (CI95 = 0.82□1.19). The overall prevalence in Asia is PP = 0.70 (CI95=0.44□1.0).

**Conclusion:** Our study reveals that Huntington Disease affects the population in Asia to a lesser extent than Europe, although some countries like Middle East present with the higher prevalence. The plausible explanation for differences in prevalence is that some countries the affected individuals will not self-refer to HD screening for fear of social stigma and negative influence in marriage and lack of genetic and neurological testing, and other explanation that studies that used genetic testing exclusively were able to identify the CAG repeats, subgroups of CAG repeats A1 & A2, and also haplogroup C, which has less predisposition to high HD prevalence in the Asian population when compared to the Caucasian population.

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