



## Non-Ionizing Radiation & Children's Health

International Joint Workshop  
18 - 20 May 2011, Ljubljana, Slovenia

POSTER

PLATFORM PRESENTATION

### Predictors Of Mobile Phone Use And Overestimation Of Recalled Mobile Phone Use Among Children And Adolescents In A Case-Control Study (Cefalo-Study)

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Whether mobile phones increase the risk for brain tumours among children and adolescents is currently being studied by an international case-control study (CEFALO). Because case-control studies rely on the participants' retrospective reconstruction of mobile phone use, they are prone to recall errors which may lead to a biased risk estimate. In this study, we assessed possible predictors of overestimation among CEFALO participants. We used objective operator-recorded data from Denmark and Sweden to compare the self-reported with the operator-recorded mobile phone use. We compared the operator-recorded phone use from Denmark and Sweden with the self-reported cumulative number and duration of calls as well as the time since first use of mobile phones by calculating the ratio of self-reported to operator-recorded mobile phone use. We used linear regression models to assess possible predictors of the amount of mobile phone use. Further, we dichotomized the participants according to the ratio of recalled to operator-recorded phone use: subjects with a ratio  $\geq 1.5$  were classified as overestimators. We then used a logistic regression model to assess possible predictors of overestimation. The cumulative number and duration of calls as well as the time since first use of mobile phones were overestimated on average by cases and controls. Per year of age, number of calls significantly increased by 16% and duration of calls by 14%. Female participants were shown to have a lower amount of phone use than male participants. Subjects of age 15–19 had a higher probability to overestimate their cumulative number and duration of calls compared to participants aged 7–14. Interestingly, a higher amount of mobile phone use was not associated with a higher probability to overestimate the mobile phone use. Heavy users of mobile phones had a lower probability of overestimating their number and duration of calls. Further, we saw a tendency for children of parents of higher socio-economic status to have a lower probability to overestimate their phone use. Our findings indicate that adolescents rather overestimate their phone use than underestimate similar what was observed for adults. Further, we found that higher levels of mobile phone use were not associated with a higher probability of overestimation of phone use.