

Number of Children - Partially Additive Model

December 4, 2025

For the following partially additive model the "children"-data from the package "catdata" are used.

```
library(catdata)
data(children)
```

Additive Models are fitted with the function "gam" from "mgcv".

```
library(mgcv)
```

Here the model is fitted and the summary is printed.

```
gamchild <- gam(child ~ s(age) + s(dur) + as.factor(nation) + as.factor(god) +
  as.factor(univ), data=children, family=poisson(link=log))
summary(gamchild)
```

Now the smooth effects can be plotted, the option "select" determines which effect is plotted.

```
par(cex=1.5)
plot(gamchild, select=1, ylab="", xlab="Age")
```

```
par(cex=1.5)
plot(gamchild, select=2, ylab="", xlab="Duration")
```