**SUPPLEMENTS**

\*gam.check() generates four plots:

<1> Quantile-quantile plots of residuals

<2> Histogram of residuals

<3> Residuals vs. linear predictor

<4> Observed vs. fitted values

The model diagnostics from gam.check(): Model 1, no covariates

|  |  |
| --- | --- |
| Chart, line chart  Description automatically generated<1> | Chart, scatter chart  Description automatically generated  <3> |
| Chart, histogram  Description automatically generated  <2> | Chart, scatter chart  Description automatically generated  <4> |

The model diagnostics from gam.check(): Model 2, adjusted for sociodemographic data

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| --- | --- |
| Chart, line chart  Description automatically generated  <1> | Chart, scatter chart  Description automatically generated<3> |
| Chart, histogram  Description automatically generated  <2> | Chart, scatter chart  Description automatically generated  <4> |

The model diagnostics from gam.check(): Model 3, Model 2 + lifestyle and clinical covariates

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| --- | --- |
| Chart, line chart  Description automatically generated<1> | Chart, scatter chart  Description automatically generated  <3> |
| Chart, histogram  Description automatically generated  <2> | Chart, scatter chart  Description automatically generated  <4> |