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**Low income, being without employment, and living alone: How they are associated with cognitive functioning - Results from the German National Cohort (NAKO)**

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**Background:** While people with low socioeconomic status tend to have worse cognitive functioning, little is known about the impact of specific socioeconomic conditions. Aim of the present analysis was to investigate to what extent cognitive functioning differs by three socio-economic conditions: low income, being without employment, and living alone.
**Methods:** A total of $N = 158,144$ participants (age 19-75 years) of the population-based German National Cohort (NAKO) provided data on socioeconomic conditions and completed cognitive testing. Multivariable regression model including the three socioeconomic conditions, age, sex, education, occupational status, having diabetes, hypertension, myocardial infarction, stroke, and depressive symptoms was used for analysis.
**Results:** Results from fully adjusted analysis indicated that cognitive functioning (z-score) was lower among those with low income (b=-0.53, CI95%=-0.57; -0.49) compared to not having low income, living alone (b=-0.10, CI95%=-0.14; -0.07) compared to not living alone, and being without employment (b=-0.22, CI95%=-0.27; -0.17) compared to being employed. The difference in cognitive functioning between those exposed compared to not exposed to the condition was changing slightly with older age among those with low income (interaction with age b=-2.39, CI95%=-3.24; -1.55) and, to a smaller extent, among those living alone (interaction with age b=-0.76, CI95%=-1.34; -0.19).
**Conclusions:** Low income, being without employment, and living alone were independently associated with poorer cognitive functioning after adjusting for confounders. As those with low income had the poorest cognitive functioning in old age, it is important to explore pathways of how cognitive health in this population group can be improved.