M. COLOMBO, R. VACCARO, S. ABBONDANZA, F. CONTI, D. ZACCARIA, A. GUAITA. ***Technology usage and cognitive performance in a cohort study.*** *Gerontechnology 2016;15(suppl): 149s*; doi:10.4017/gt.2016.15.s.718.00 **Purpose** We aimed at examining the relationships between (i) birth-year and schooling with technology usage, tracked longitudinally, and (ii) personal computer utilization at baseline and throughout the waves of observation with longitudinal evaluation of related cognitive performance. An ancillary objective was the investigation of the relationships between hearing and technologies usage. **Method** Data were drawn from the longitudinal cohort study 'InveCeAb' on cognitive ageing[1,2]. The dichotomized (yes/no) usage was tracked for 6 technologies at baseline (2010) and the following 2 waves (2012 & 2014); a cumulative usage score ranged from 0 to 6. Trail Making Test part A and part B (TMT-A and TMT-B), for selective attention and attentional control respectively were checked thrice. TMT-B–TMT-A was also taken into account. Descriptive data, cross-tabulations, analysis of variance and general linear model were run through SPSS. **Results & Discussion** At baseline, younger people (born 1939) were more prone to drive a car (60%), to use a cash dispenser (52%), a mobile phone (85%), a PC and the web (both 13%), without gender differences. Four years later, the same unbalance in distribution holds at cross-tabulation except for mobile phone; everybody employ remote control. Borderline statistically not-significant differences in schooling favoured younger cohorts about by 1 school year (p=0.056). By multivariate analysis, younger cohort (1939) used a higher number of techs in longitudinal assessment: schooling and its interaction with waves of observation were significant. Higher schooling (p=0.000; partial eta squared=0.066) and PC use at baseline (p=0.016; partial eta squared=0.008) were associated with a better longitudinal performances in TMT-A, with no interactions. Longitudinal performance in TMT-B worsened along the ageing of the cohort, being associated with schooling (p=0.000; partial eta squared=0.12) and PC use at baseline (p=0.042; partial eta squared=0.007), without interactions. Also the time difference (in seconds) TMB-T minus TMT-A increased along the ageing of the cohort, being associated with schooling (p=0.000; partial eta squared=0.111), without interactions. Higher schooling (p=0.000; partial eta squared=0.057) and persistence in PC usage (p=0.001; partial eta squared=0.019) were associated with better longitudinal performances in TMT-A, with no interactions. Performance in TMT-B worsened with time, being associated with schooling (p=0.000; partial eta squared=0.113) and its interaction with waves of observation (p=0.044; partial eta squared=0.005), but the persistence in PC usage was marginally not significant (p=0.058). Increases in time differences TMB-T minus TMT-A along the waves of observation was associated with schooling (p=0.000; partial eta squared=0.108), but not with persistence in PC usage; the interaction between waves of observation and schooling is borderline statistically not-significant (p=0.055). No difference in tech usage was found according to hearing at baseline, car driving included. Notwithstanding low formal education, old people in our cohort – who lived their infancy in wartime - use technologies. Ageing, schooling and PC practice were reasonably associated to pertinent cognitive performance[3].

References

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