Measuring cognitive change in subjects with prodromal Alzheimer's disease.

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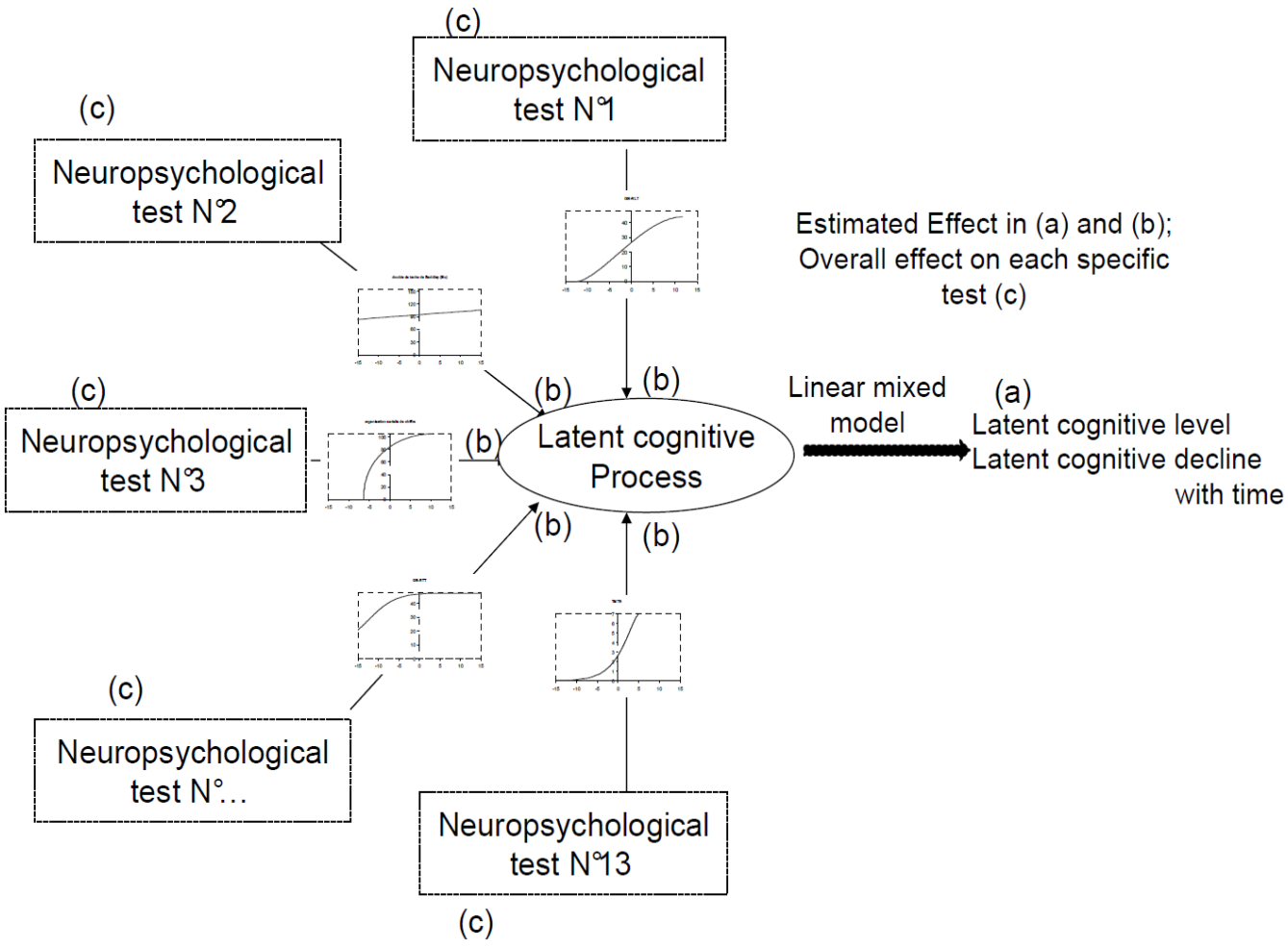
Figure 1: Conceptualization of the nonlinear mixed model involving a latent process to model cognition from several neuropsychological tests.

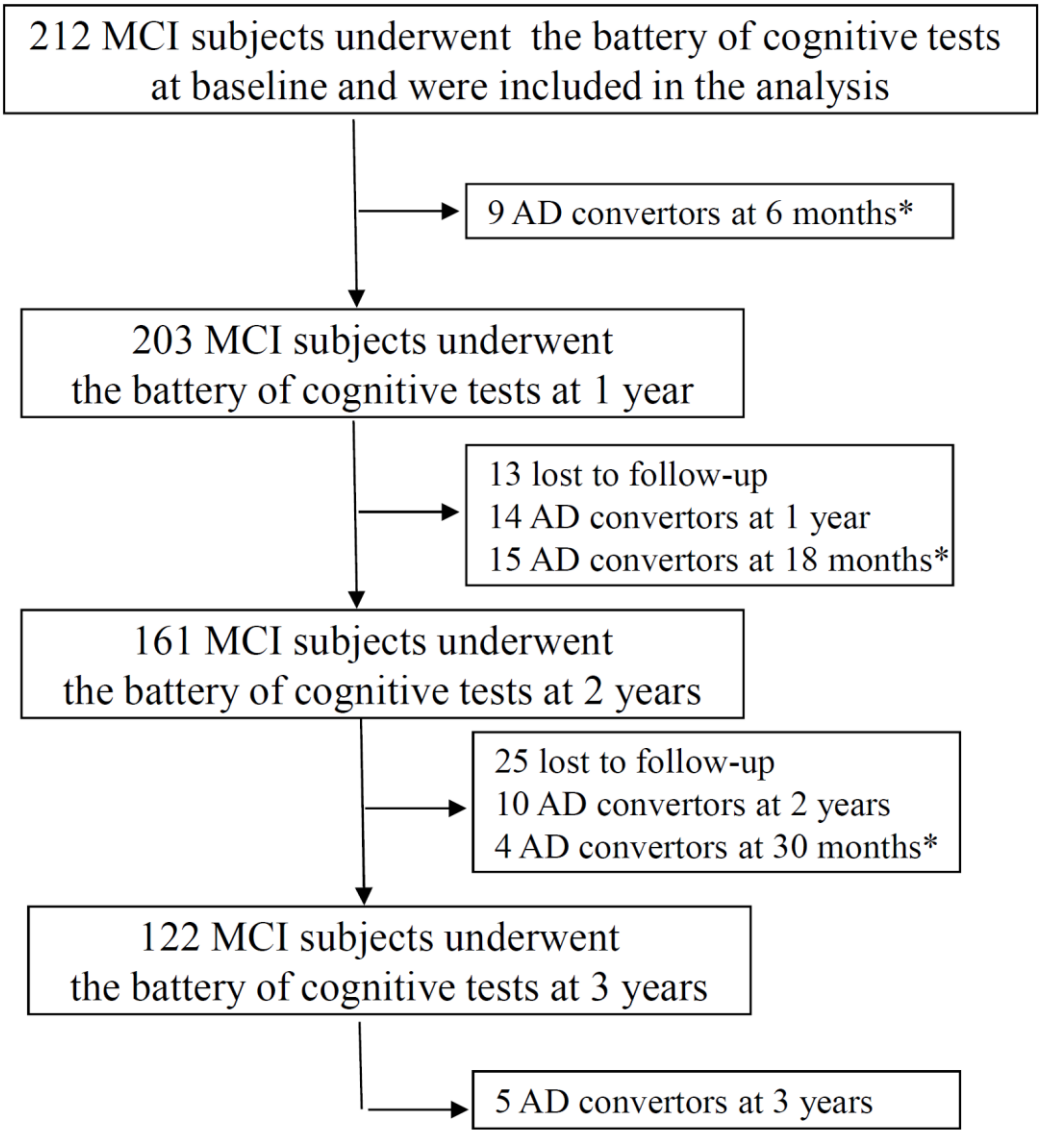


(a) A linear mixed model describes the change over time in the latent cognitive process and evaluates the common effects of covariates on this latent cognitive trajectory

(b) Test-specific measurement models relate each administration of the psychometric tests with the latent cognitive process, by accounting for and describing the metrological properties of the tests and test-specific associations with covariates.

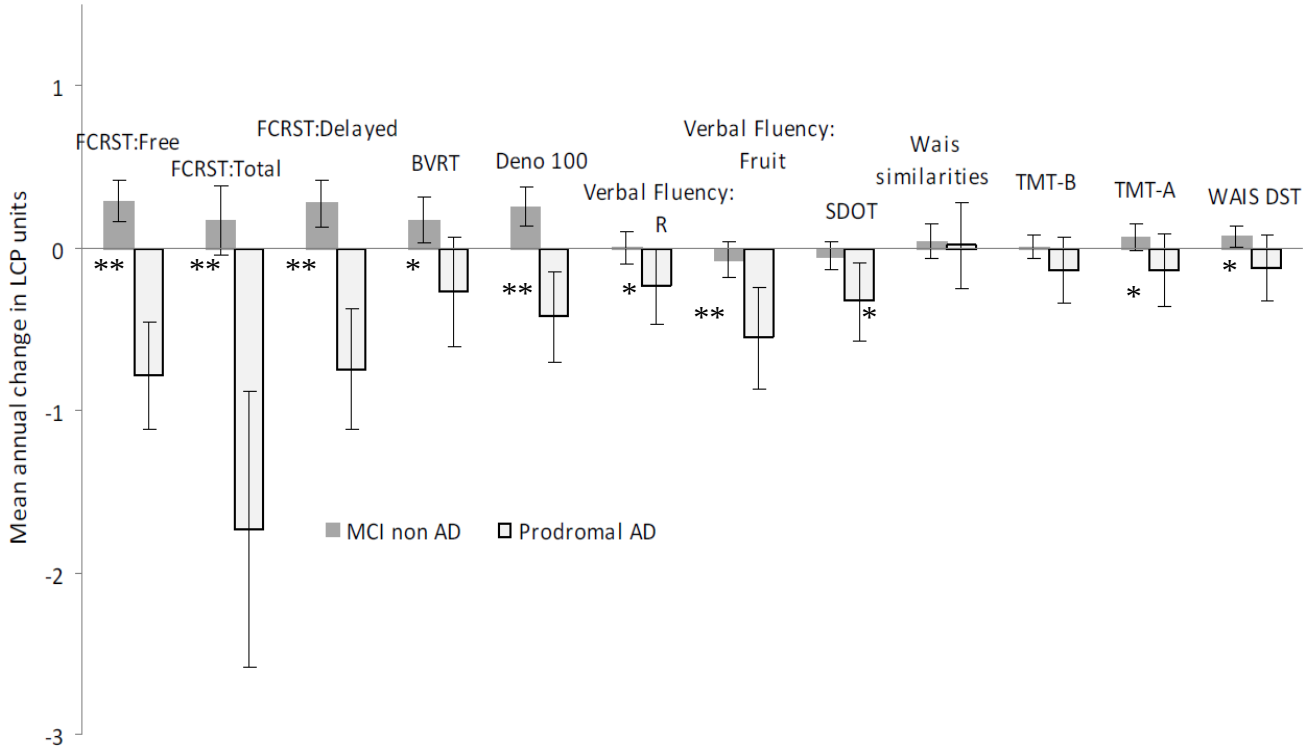
(c) Overall effect of a covariate on each specific test is calculated by adding together the effect of the covariate on the latent cognitive process (a) and the test-specific effect (b).

Figure 2: Diagram mapping the administration of the neuropsychological tests and the occurrence of AD during the three-year follow-up (FU) of the study.



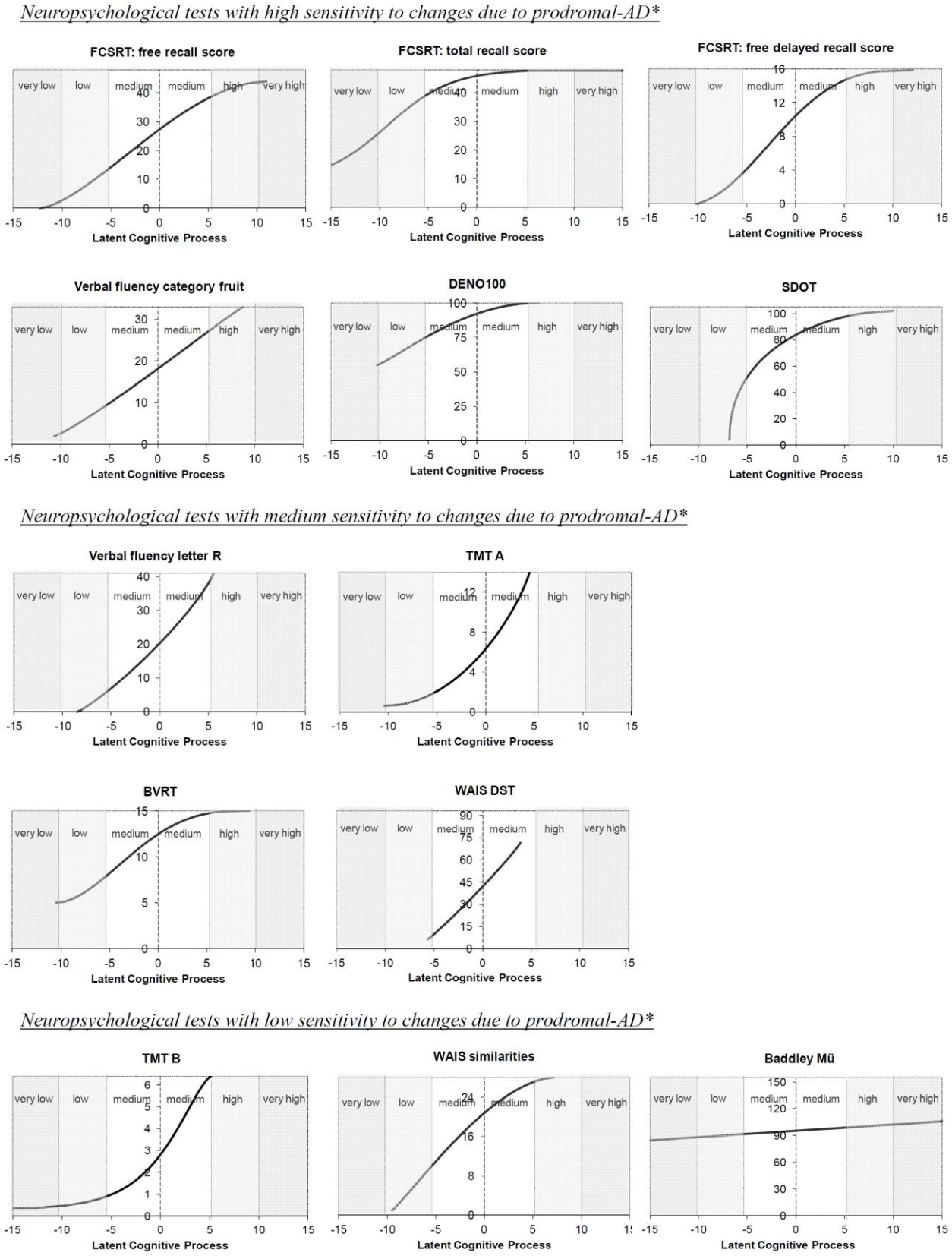
* In the event of a suspected conversion, the patient underwent an additional neuropsychological evaluation 6 months later.

Figure 3: Mean annual change for each neuropsychological test according to the occurrence of AD during the follow-up (in latent cognitive process units).



Mean annual change with 95% confidence interval for each neuropsychological test (in latent cognitive process unit) for a 71.8 year-old woman with a low level of education.
*denotes a significant difference (adjusted for age, sex and level of education) between Prodromal-AD and MCI Non-AD ($p<0.05$), ** for $p<0.01$
Baddeley Mü was not represented in this figure because of its high level of individual variability; this test did not significantly change over time in any group and was not different between groups.

Figure 4: Metrological properties of the thirteen neuropsychological scores used in the study



*according to the previous results display in figure 3