**Supplementary material. Description of GBTM fitting procedure – Model selection**

Selecting the number of underlying latent classes (class-enumeration) is a decisive stage of GBTM, representing the first step in a relatively lengthy and iterative analytical process. To do so, we followed best practice guidelines.

Nagin (GBTM’s developer) recommends a two-step procedure (manuscript reference 28). First, the number of latent trajectories, *k*, was selected based on several fit-indices. For this purpose, we applied the F-CAP (Fit criteria Assessment Plot application (manuscript reference 29). This involves settling for the highest polynomial order for all *k’*s (given 5 time points, we selected quartic polynomials), and maximum number of trajectories *k* (given our sample size, we selected maximum *k*=7). We then ran the model for all selected *k’*s with fixed higher polynomial for all classes. The F-CAP is an applet that condenses relevant GBTM output information of model fitness in automated graphical displays. These provide an overview of fit criteria on a single page, showing how they change as a function of increasing *k*. This summary overview places users in an informed position to make a decision. F-CAP does not automatically select the most appropriate model, but eases the model assessment procedure. Supplementary Figure 1 shows all F-CAPs for the bivariate GBTM. Visual inspection indicated 5 latent classes yielded the best fit to the data.

After settling for *k* = 5, the final shapes and levels of the extracted developmental trajectories were determined by pruning higher order polynomial terms, one at a time. For this purpose, Wald significance tests (at 5% level) were used, keeping at the same time a watch on BIC, especially for regression coefficient with p-values ~0.1/0.2. Often by deleting these terms leads to a deterioration of BIC. For this reason, some polynomials were kept in the model, despite marginally missing the 5% (See, for instance, supplementary Table 1 with the regression parameters of trajectories 2 and 5 for both outcomes ASDAS and ASQoL).