LPA Analyses Using Reduced Sample (N=1361)

Matt Blanchard

1 Number of participants from each country

Table 1

Number of participants from each country

|	Australia	Canada	UK	US	total
n	370	307	370	314	1361
percent	27	23	27	23	100

2 Goodness of fit indices for 2 to 6 profile models

Table 2

Goodness of fit indices for 2-6 profile models

Model	Classes	LogLik	AIC	BIC	Entropy	BLRT_val	BLRT_p
1	2	-39553	79235	79568	0.94	1982	0.01
1	**3**	**-38725**	**77623**	**78072**	**0.97**	**1656**	**0.01**
1	4	-38329	76874	77437	0.87	793	0.01
1	5	-38091	76442	77120	0.86	476	0.01
1	6	-37943	76190	76983	0.82	296	0.01

3 2 profile model

3.1 Plot
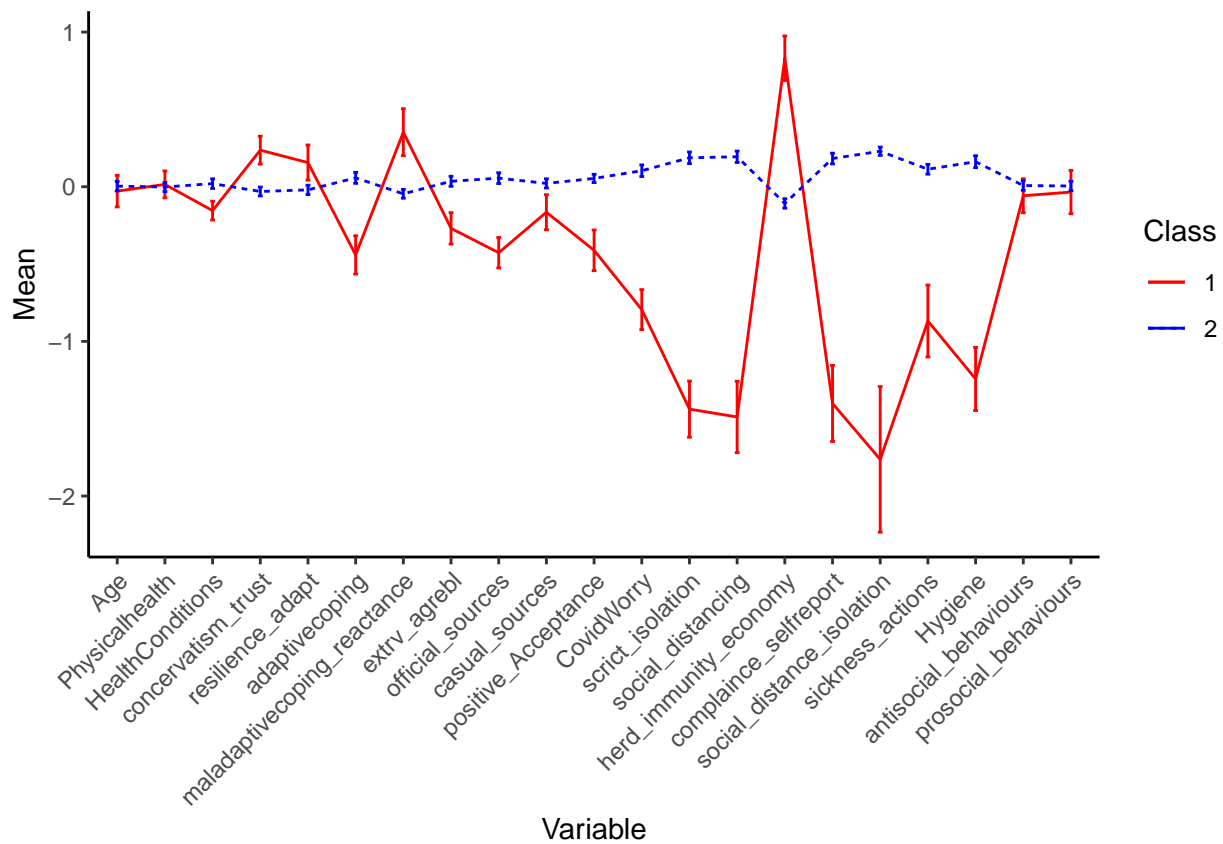
3.2 Latent profile membership

3.2.1 Overall membership

Table 3
Number and percent of participants in each profile

	1	2	total
n	152	1209	1361
percent	11	89	100

3.2.2 Country membership

Table 4
Number of participants from each country in each profile

CountryLive	1	2	total
Australia	47	323	370
Canada	22	285	307
UK	26	344	370
US	57	257	314

3.2.3 Gender membership

Table 5

Number of participants from each gender in each profile

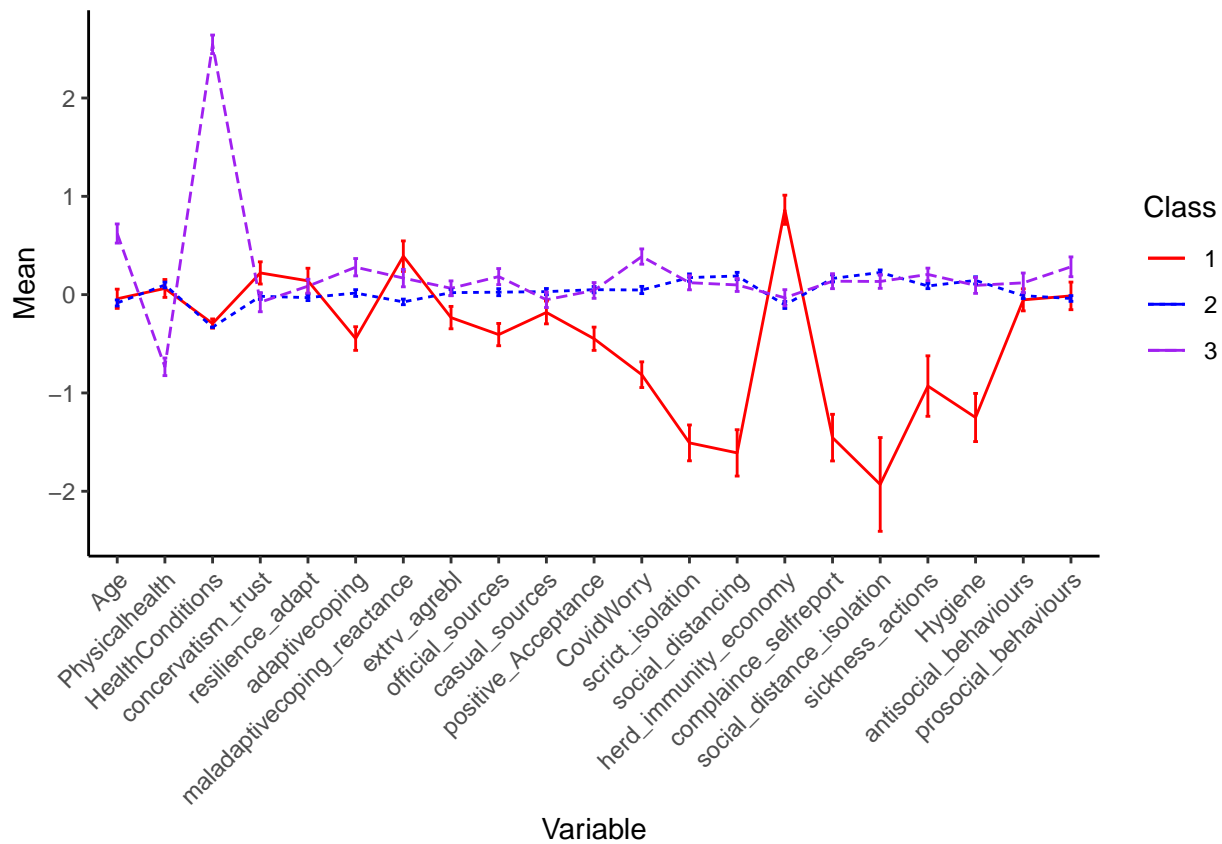| Gender	1	2	total
female	75	776	851
male	75	420	495
NA	2	13	15

3.2.4 Differences on demographic variables

Table 6

Differences between latent profiles on demographic variables

var	mean_1	mean_2	t	p.value	df	conf.low	conf.high
AnnualIncome_usd	52861.8	54210.5	-0.25	0.80	1196	-12063.67	9366.27
Education	4.6	4.9	-1.81	0.07	1359	-0.54	0.02
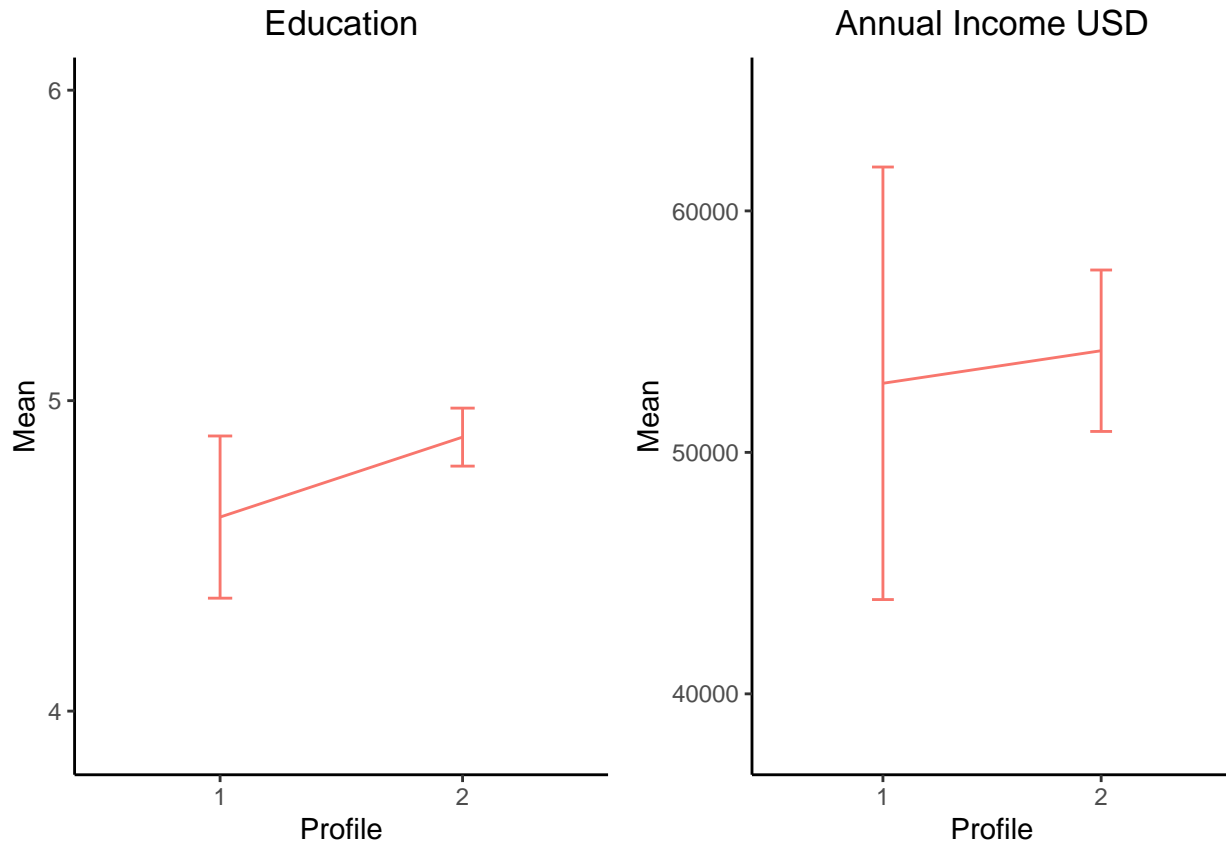
4 3 profile model

4.1 Latent profile membership

4.1.1 Overall membership

Table 7
Number and percent of participants in each profile

	1	2	3	total
n	137	1069	155	1361
percent	10	79	11	100

4.1.2 Country membership

Table 8
Number of participants from each country in each profile

CountryLive	1	2	3	total
Australia	44	290	36	370
Canada	19	250	38	307
UK	22	310	38	370
US	52	219	43	314

4.1.3 Gender membership

Table 9

Number of participants from each gender in each profile

| Gender	1	2	3	total
female	68	675	108	851
male	67	384	44	495
NA	2	10	3	15

4.1.4 Differences on demographic variables

Table 10

Differences between latent profiles on demographic variables

var	term	df	sumsq	meansq	F	p
Education	.x$Class	1	22	22.3	8.159	0.004
Education	Residuals	1359	3712	2.7		
AnnualIncome__usd	.x$Class	1	1630590	1630589.9	0	0.983
AnnualIncome__usd	Residuals	1196	4162348007317	3480224086.4		

Education
Annual Income USD
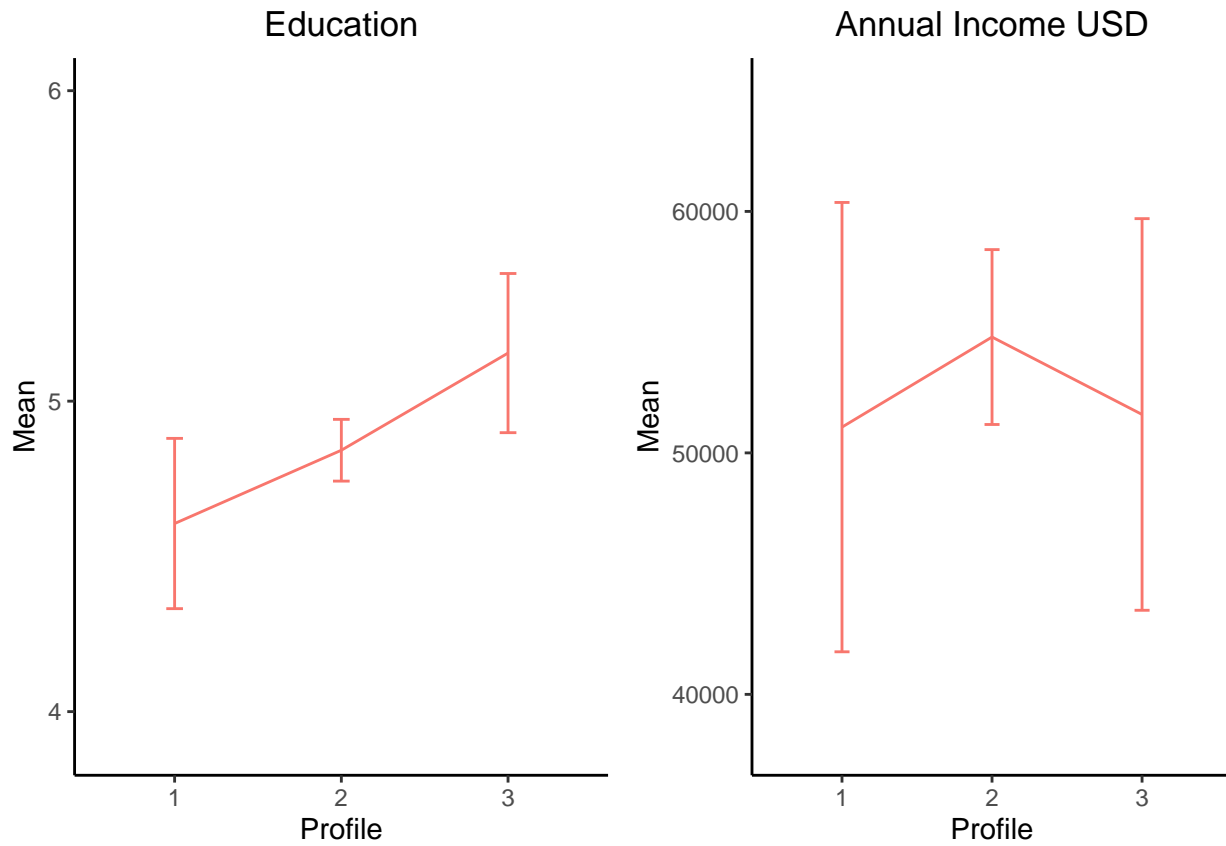
5 4 profile model
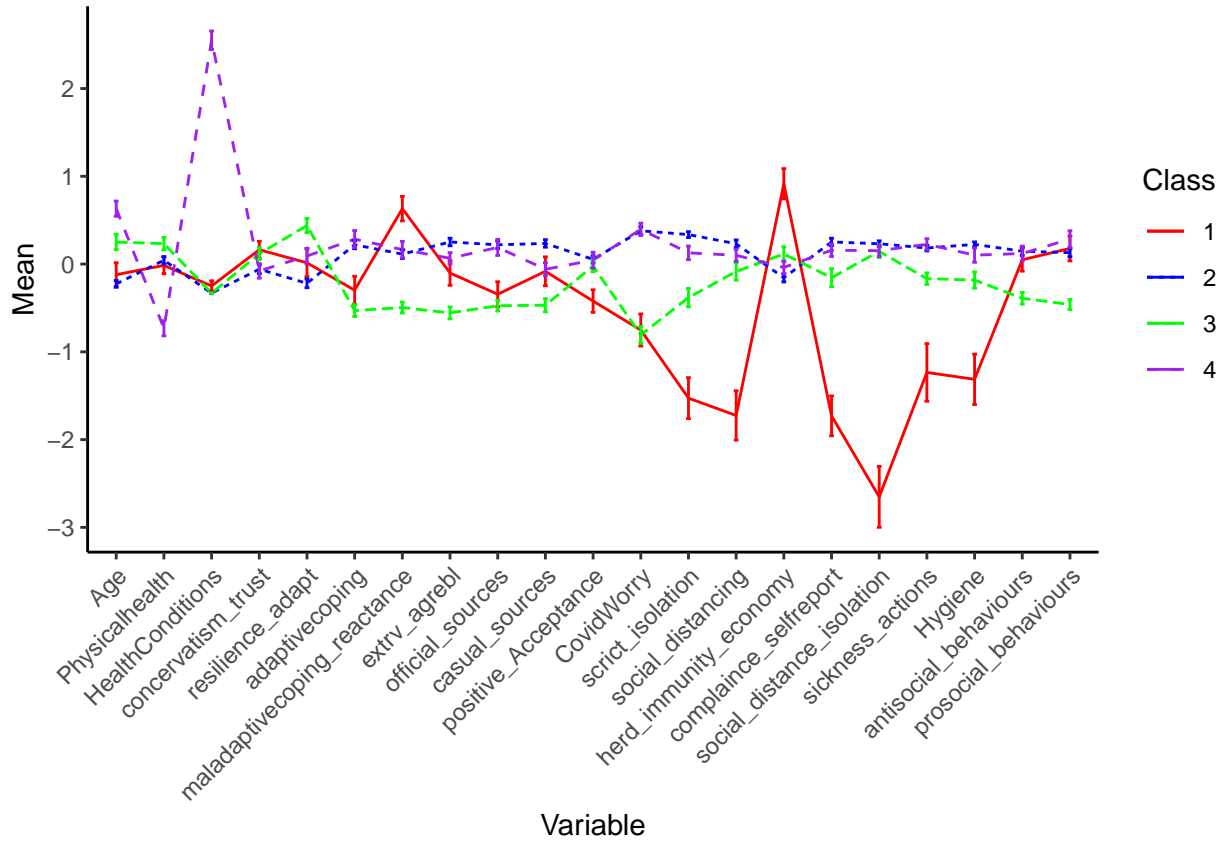
5.1 Latent profile membership

5.1.1 Overall membership

Table 11

Number and percent of participants in each profile

	1	2	3	4	total
n	95	790	322	154	1361
percent	7	58	24	11	100

5.1.2 Country membership

Table 12

Number of participants from each country in each profile

CountryLive	1	2	3	4	total
Australia	33	218	84	35	370
Canada	12	190	67	38	307
UK	13	218	101	38	370
US	37	164	70	43	314

5.1.3 Gender membership

Table 13

Number of participants from each gender in each profile

Gender	1	2	3	4	total
female	52	537	155	107	851
male	41	244	166	44	495
NA	2	9	1	3	15

5.1.4 Differences on demographic variables

Table 14

Differences between latent profiles on demographic variables

var	term	df	sumsq	meansq	F	p
Education	.x$Class	1	42	41.7	15.35	0
Education	Residuals	1359	3692	2.7		
AnnualIncome__usd	.x$Class	1	1001181487	1001181486.6	0.288	0.592
AnnualIncome__usd	Residuals	1196	4161348456420	3479388341.5		

7
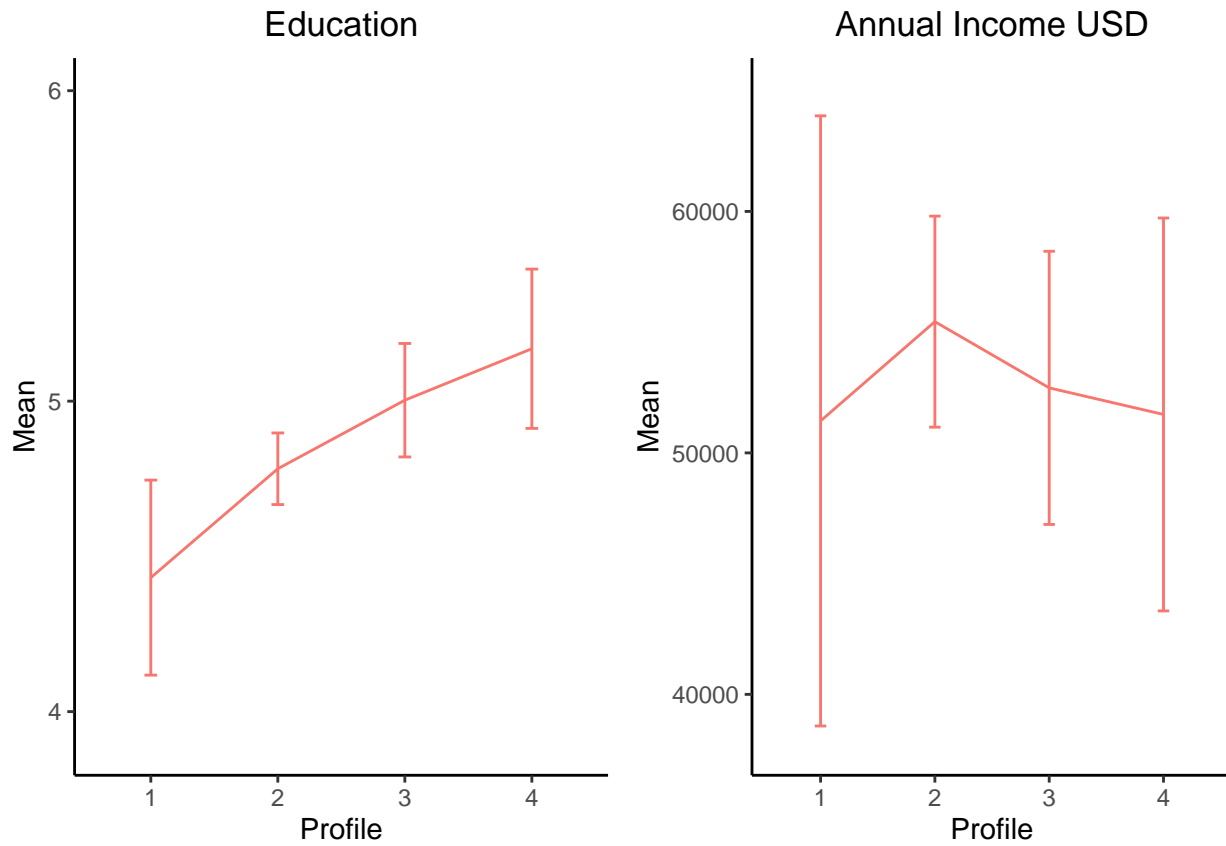
6 List of goodness of fit indices

A list and description of the GFI that can be computed for LPA models.

- LogLik: Log-likelihood of the data, given the model.

- AIC: Aikake information criterion; based on -2 log-likelihood, and penalized by number of parameters.

- BIC: Bayesian information criterion; based on -2 log-likelihood, and penalized by number of parameters adjusted by sample size.

- Entropy: A measure of classification uncertainty, reverse-coded so that 1 reflects complete certainty of classification, and 0 complete uncertainty (see Celeux & Soromenho, 1996).

- BLRT: bootstrapped likelihood test.

- BLRT p-value: p-value for the bootstrapped likelihood ratio test.

- AWE: Approximate weight of evidence; combines information on model fit and on classification errors (Celeux et al., 1997).

- CAIC: Consistent Aikake information criterion; based on -2 log-likelihood, and penalized by number of parameters adjusted by sample size.

- CLC: Classification Likelihood Criterion; based on -2 log-likelihood, and penalized by the entropy (Biernacki, 1997).

- KIC: Kullback information criterion; based on -2 log-likelihood, and penalized by 3 times the number of parameters -1 (Cavanaugh, 1999).

- SABIC: Sample size-adjusted Bayesian information criterion (Sclove, 1987).

- ICL: Integrated completed likelihood (Biernacki, Celeux, & Govaert, 2000).

- Prob. Min.: Minimum of the diagonal of the average latent class probabilities for most likely class membership, by assigned class. The minimum should be as high as possible, reflecting greater classification certainty (cases are assigned to classes they have a high probability of belonging to; see Jung & Wickrama, 2008).

- Prob. Max.: Maximum of the diagonal of the average latent class probabilities for most likely class membership, by assigned class. The maximum should also be as high as possible, reflecting greater classification certainty (cases are assigned to classes they have a high probability of belonging to).

- N Min.: Proportion of the sample assigned to the smallest class (based on most likely class membership).

- N Max.: Proportion of the sample assigned to the largest class (based on most likely class membership).