LPA Analyses Using Full Sample (N=1575)

Matt Blanchard

1 Number of participants from each country

Table 1

Number of participants from each country

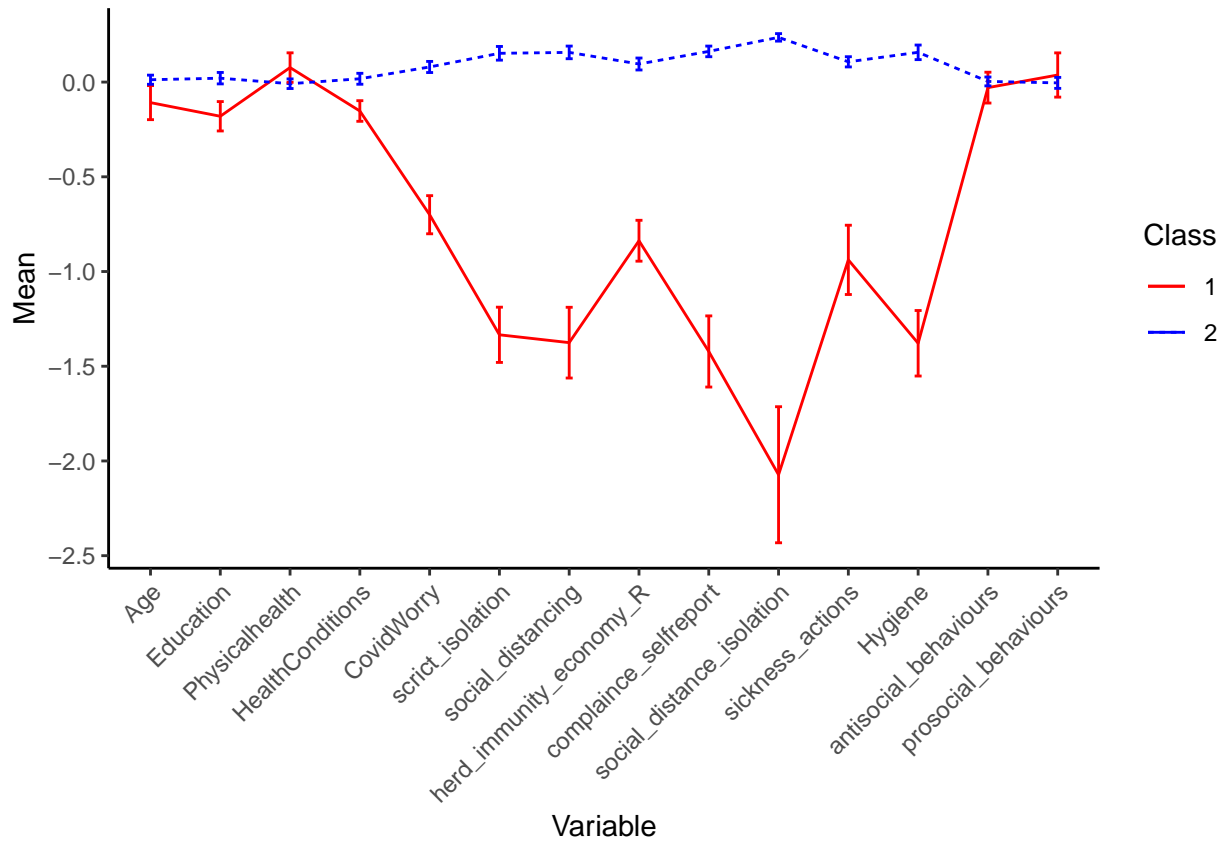|	Australia	Canada	UK	US	total
n	609	303	366	297	1575
percent	39	19	23	19	100

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
1	2	-30250	60585	60816	0.95
1	**3**	**-29747**	**59610**	**59921**	**0.96**
1	4	-28953	58053	58444	0.96
1	5	-28714	57603	58075	0.94
1	6	-28544	57295	57847	0.93

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	164	1411	1575
percent	10	90	100

3.2.2 Country membership

Table 4
Number of participants from each country in each profile

CountryLive	1	2	total
Australia	72	537	609
Canada	19	284	303
UK	21	345	366
US	52	245	297

3.2.3 Gender membership

Table 5

Number of participants from each gender in each profile

Gender	1	2	total
1	79	473	552
2	85	938	1023

### 3.2.4 Differences on out of model variables

3.2.4.1 Ordinal/Continuous variables

Table 6

Ordinal/continuous variables: Differences between profiles on each variable outside model

var	mean_1	mean_2	df	t	p.value	conf.low	conf.high
CRT_acc	45.76	48.47	462	-0.58	0.564	-11.90	6.49
belief_acc	53.02	56.44	460	-0.81	0.416	-11.68	4.84
EAT_acc	64.45	67.95	865	-1.74	0.082	-7.46	0.44
CRT_conf	78.39	81.22	462	-1.21	0.227	-7.45	1.77
belief_conf	91.09	91.28	460	-0.15	0.884	-2.67	2.30
EAT_conf	72.91	75.40	867	-1.84	0.066	-5.15	0.17
trait_conf	82.22	82.97	460	-0.50	0.619	-3.69	2.20
agreeableness	**14.73**	**15.73**	**1573**	**-3.88**	**<.001**	**-1.50**	**-0.49**
conscientious	13.62	13.83	1573	-0.81	0.42	-0.73	0.30
extraversion	**12.14**	**11.07**	**1573**	**3.16**	**0.002**	**0.40**	**1.72**
intellect	**14.67**	**15.18**	**1573**	**-2.02**	**0.044**	**-1.00**	**-0.01**
neuroticism	11.54	11.85	1573	-1.04	0.298	-0.90	0.28
resilience_adapt	**0.15**	**-0.02**	**1573**	**1.98**	**0.048**	**0.00**	**0.32**
cope_distraction	**5.32**	**5.96**	**1573**	**-5.01**	**<.001**	**-0.88**	**-0.38**
cope_active	**4.73**	**5.05**	**1573**	**-2.47**	**0.014**	**-0.57**	**-0.06**
cope_denial	**2.82**	**2.50**	**1573**	**3.59**	**<.001**	**0.14**	**0.49**
cope_substance	**3.19**	**2.81**	**1573**	**3.10**	**0.002**	**0.14**	**0.61**
cope_emotsupp	4.19	4.41	1573	-1.50	0.135	-0.50	0.07
cope_instrsupp	3.80	4.04	1573	-1.85	0.064	-0.51	0.02
cope_disengage	**3.21**	**2.91**	**1573**	**2.87**	**0.004**	**0.10**	**0.52**
cope_venting	3.77	3.69	1573	0.72	0.471	-0.14	0.31
cope_reframing	4.94	5.05	1573	-0.83	0.407	-0.39	0.16
cope_planning	**4.38**	**4.89**	**1573**	**-3.87**	**<.001**	**-0.77**	**-0.25**
PHQ	39.08	38.33	405	0.40	0.689	-2.95	4.45
DASS_stress	8.38	7.25	408	1.43	0.155	-0.43	2.69
DASS_anxiety	5.40	4.14	408	1.88	0.06	-0.06	2.57
DASS_depression	6.72	6.53	408	0.24	0.811	-1.38	1.77
social_media_n	1.96	2.00	1573	-0.37	0.71	-0.24	0.17
SourceCheck	**3.17**	**3.44**	**1573**	**-3.02**	**0.003**	**-0.45**	**-0.10**
CheckNews	**3.27**	**3.72**	**1573**	**-5.33**	**<.001**	**-0.61**	**-0.28**
official_sources	**-0.34**	**0.04**	**1573**	**-4.57**	**<.001**	**-0.54**	**-0.21**
casual_sources	-0.10	0.01	1573	-1.29	0.198	-0.27	0.06
official_trust	**-0.59**	**0.07**	**1573**	**-8.18**	**<.001**	**-0.82**	**-0.50**
casual_trust	**-0.19**	**0.02**	**1573**	**-2.60**	**0.01**	**-0.38**	**-0.05**
gov_trust	**0.18**	**-0.02**	**1573**	**2.47**	**0.014**	**0.04**	**0.36**
conservatism	9.88	9.69	1573	0.96	0.335	-0.20	0.59
reactance	**43.54**	**39.66**	**1573**	**5.72**	**<.001**	**2.55**	**5.21**
cultural_tightloose	**22.86**	**23.79**	**1573**	**-3.05**	**0.002**	**-1.53**	**-0.33**
RWA	8.96	9.05	1573	-0.47	0.638	-0.46	0.28
morality	**14.98**	**13.75**	**409**	**2.39**	**0.017**	**0.22**	**2.24**
leave_going_to_work	**2.32**	**1.71**	**938**	**5.30**	**<.001**	**0.38**	**0.83**
leave_walking_pet	1.60	1.72	938	-1.00	0.32	-0.36	0.12
leave_physical_activity	**2.94**	**2.69**	**938**	**2.12**	**0.034**	**0.02**	**0.48**
leave_get_food	**2.64**	**2.39**	**938**	**3.37**	**0.001**	**0.10**	**0.39**
leave_pharmacy	1.39	1.32	938	1.22	0.221	-0.04	0.18
leave_medical_treatment	1.08	1.08	938	-0.17	0.862	-0.07	0.06
leave_care_dependents	**1.40**	**1.22**	**938**	**2.55**	**0.011**	**0.04**	**0.31**
leave_meet_friends_family	**1.87**	**1.25**	**938**	**10.32**	**<.001**	**0.51**	**0.74**
leave_religion	**1.14**	**1.02**	**935**	**4.50**	**<.001**	**0.07**	**0.18**
leave_bored	**2.53**	**1.83**	**938**	**6.36**	**<.001**	**0.48**	**0.91**
leave_exercise_freedom	**2.19**	**1.34**	**938**	**9.62**	**<.001**	**0.67**	**1.01**
FinancialSit	1.74	1.72	1573	0.32	0.751	-0.08	0.12
worksupportedworkinghome	-0.09	-0.01	426	-0.44	0.662	-0.45	0.29
businessokayworkinghome	-0.14	0.01	91	-0.48	0.63	-0.77	0.47
NumberDeaths	23786.25	1834172.34	1535	-0.34	0.735	-12318909.19	8698137.01
PublicReact	**3.04**	**2.51**	**1535**	**8.01**	**<.001**	**0.40**	**0.66**
CovidLength	3.57	3.72	1535	-1.13	0.258	-0.41	0.11
HouseholdNumber	3.06	3.11	1504	-0.38	0.702	-0.29	0.19

Plots for variables with sig. difference between profiles

Error bars represent 95% confidence intervals
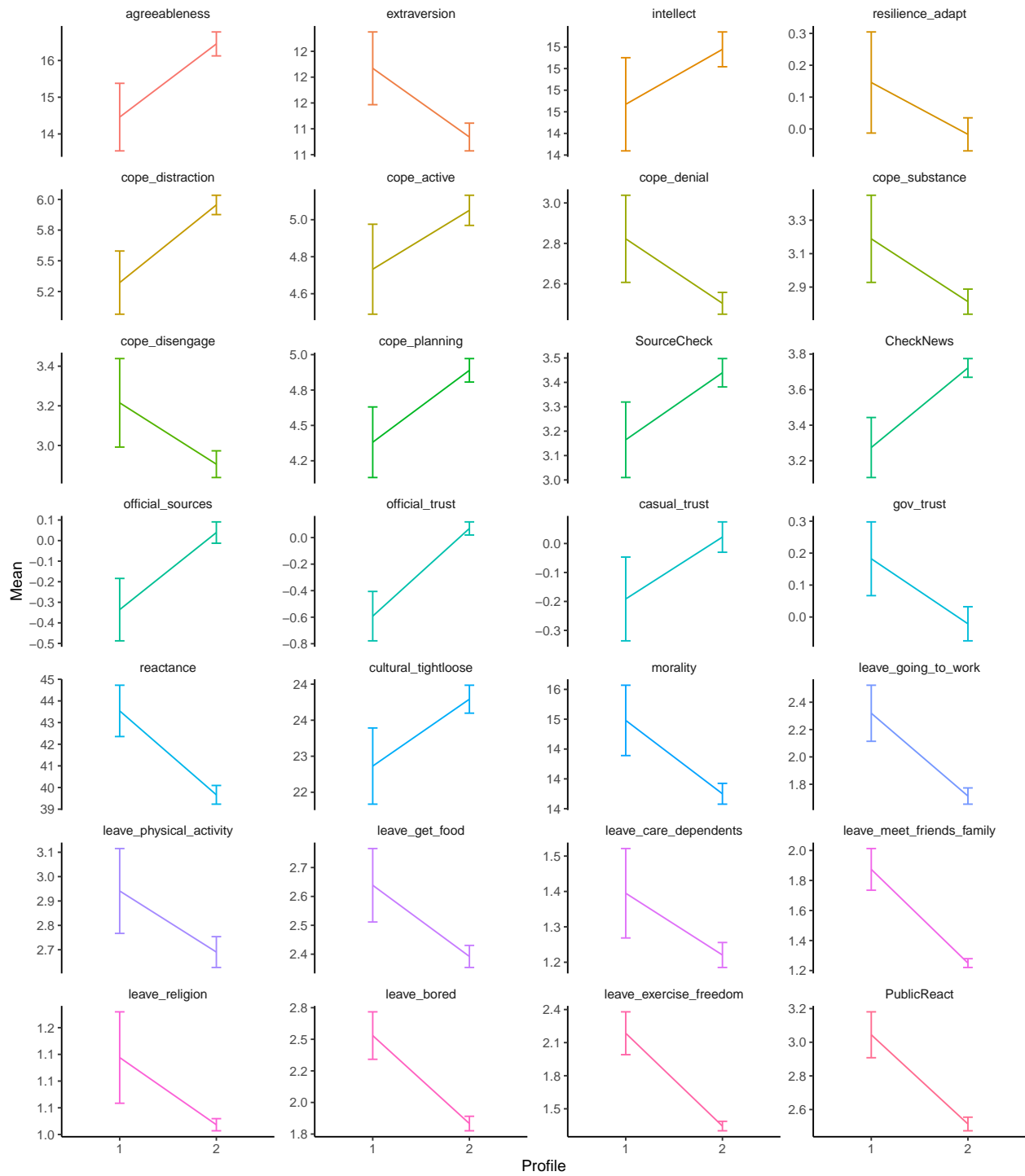
3.2.4.2 categorical variables

Chi-square test was used for categorical variables. if an observerd frequency was less than 5 in a single cell then Fisher's Exact test was used.

Table 7

Categorical variables (Chi-square): Differences between profiles on each variable outside model

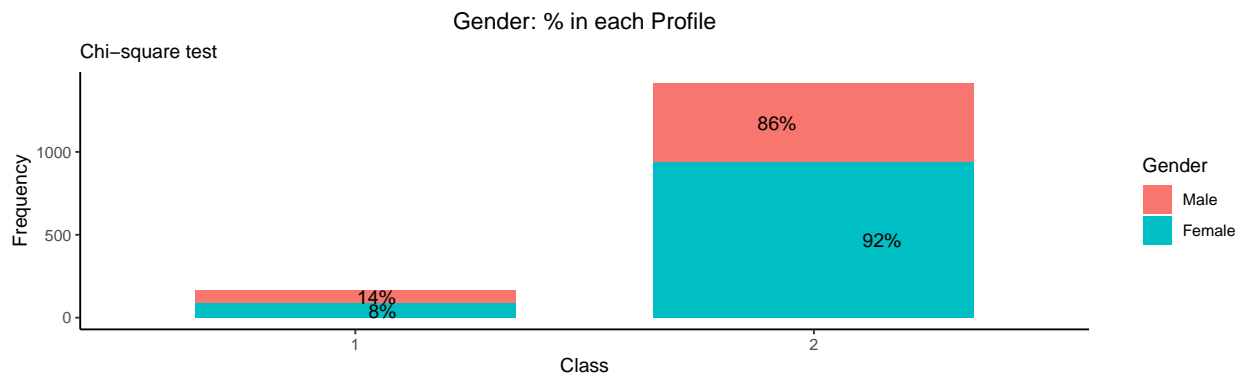| var	df	chi_sq	p.value
Children	1	0.34	0.557
CountryLive	**3**	**31.48**	**<.001**
Elderly	1	0.04	0.852
ElderlyLive	1	0.43	0.511
Gender	**1**	**13.21**	**<.001**
Job	1	0.59	0.441
Layoff	1	0.25	0.617
LeaveHome	**1**	**11.91**	**0.001**
MaritalStatus	3	4.08	0.253
Workessential	**2**	**7.91**	**0.019**

CountryLive: % in each Profile

CountryLive
- Australia
- Canada
- UK
- US

88%
94%
94%
82%
6%
12%
6%
18%

Gender: % in each Profile

Gender
- Male
- Female

86%
92%
14%
8%

LeaveHome: % in each Profile

LeaveHome
- wont_leave
- will_leave

93%
87%
7%
13%

Workessential: % in each Profile

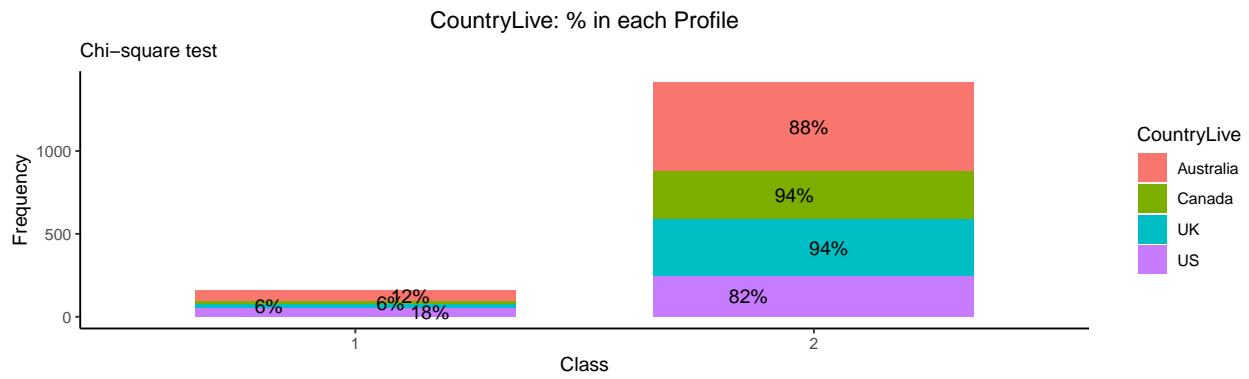**Workessential**
- Essential
- Non−essential
- Unsure

86%
91%
88%
14%
9%
12%
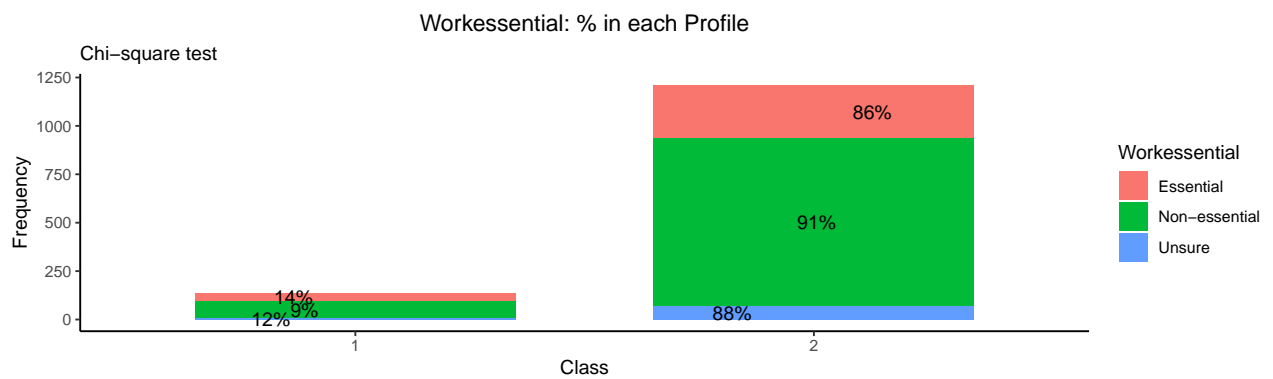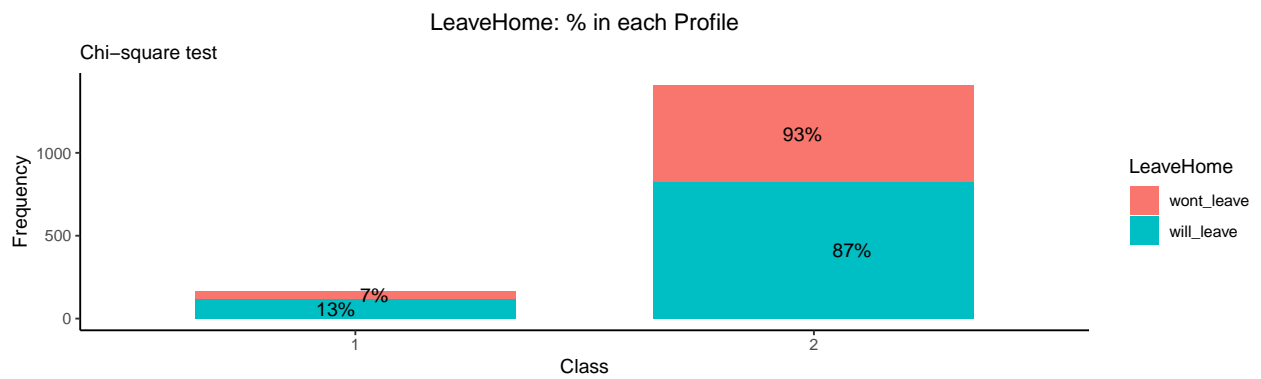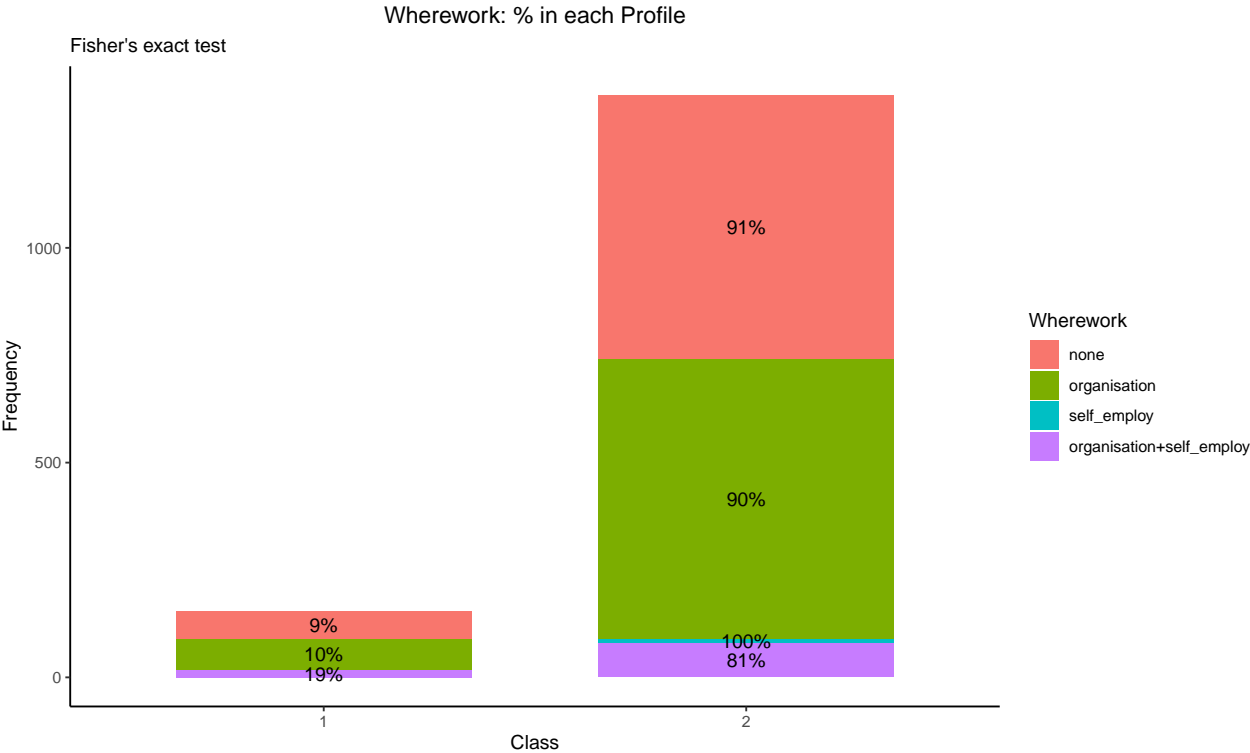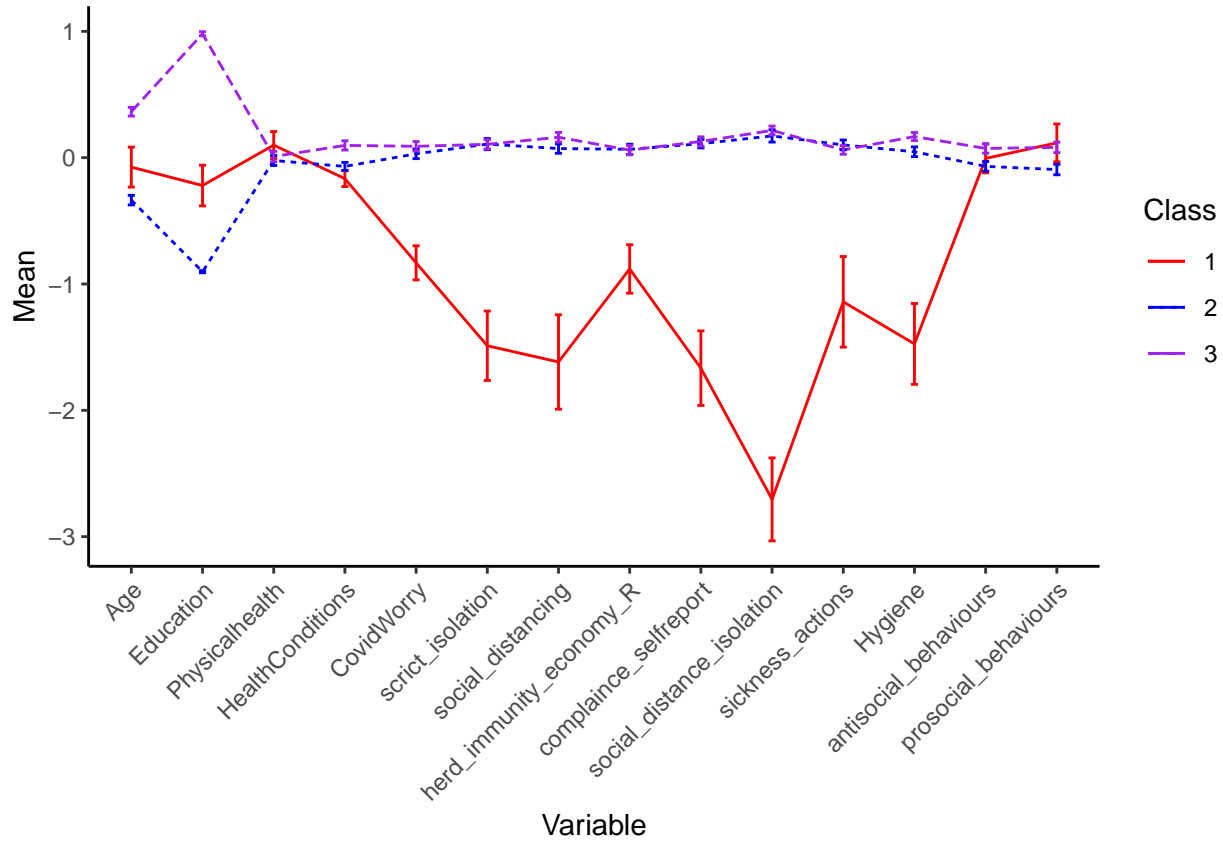
Table 8

Categorical variables (Fisher's exact): Differences between profiles on each variable outside model

var	p.value
LossofJob	1.00
Wherework	**0.04**

Wherework: % in each Profile

Fisher's exact test

4 3 profile model

4.1 Latent profile membership

4.1.1 Overall membership

Table 9

Number and percent of participants in each profile

	1	2	3	total
n	103	748	724	1575
percent	7	47	46	100

4.1.2 Country membership

Table 10

Number of participants from each country in each profile

CountryLive	1	2	3	total
Australia	46	392	171	609
Canada	12	104	187	303
UK	11	157	198	366
US	34	95	168	297

4.1.3 Gender membership

Table 11

Number of participants from each gender in each profile

Gender	1	2	3	total
1	47	253	252	552
2	56	495	472	1023

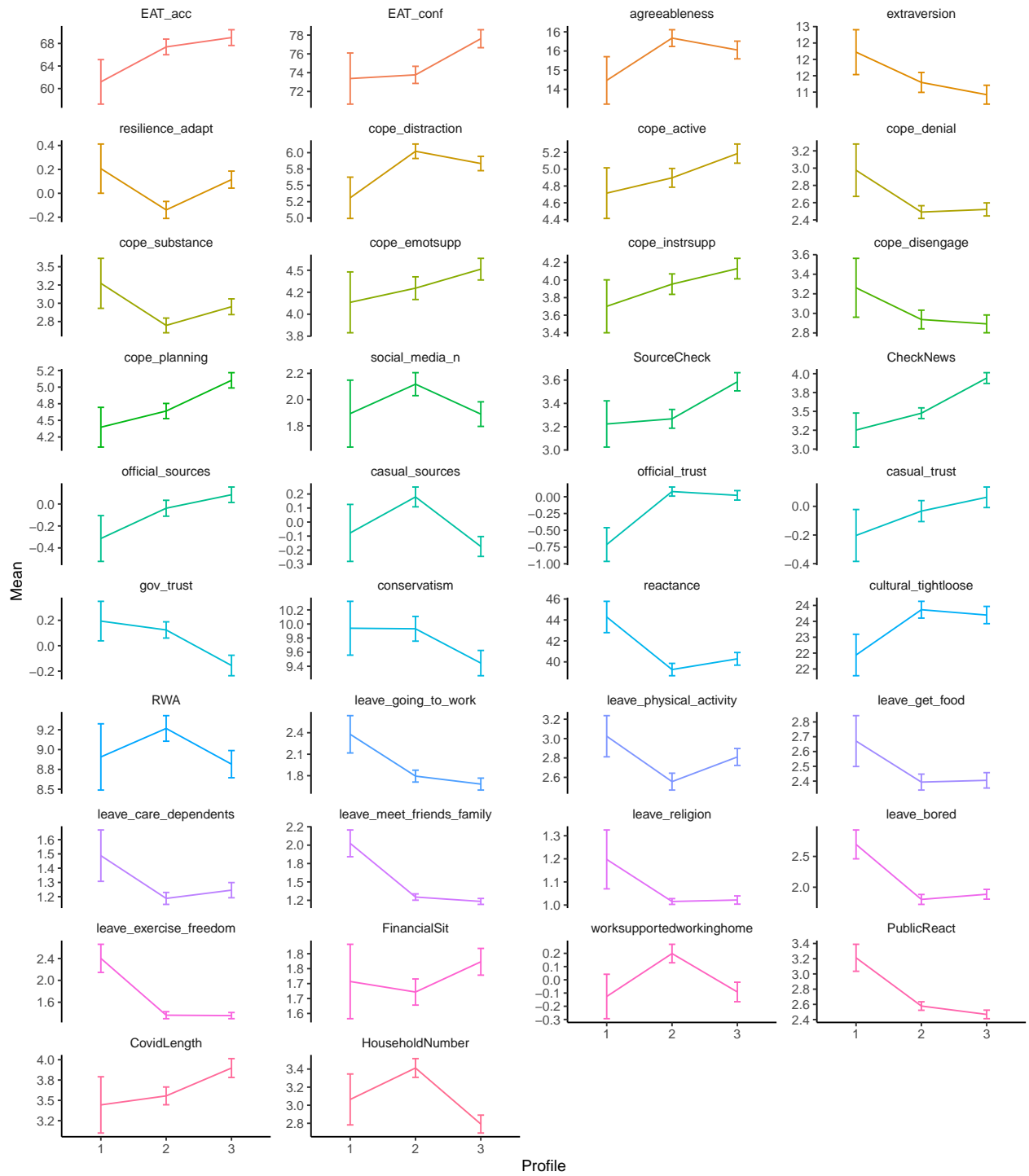### 4.1.4 Differences on out of model variables

4.1.4.1 Ordinal/Continuous variables

Table 12

Ordinal/continuous variables: Differences between profiles on each variable outside model

var	SSB	SSW	dfB	dfW	F	p.value
CRT__acc	2984.74	518236	2	461	1.33	0.266
belief__acc	3925.30	408782	2	459	2.2	0.112
EAT__acc	**3196.98**	**324095**	**2**	**864**	**4.26**	**0.014**
CRT__conf	806.04	130738	2	461	1.42	0.243
belief__conf	18.82	37357	2	459	0.12	0.891
EAT__conf	**3014.51**	**145795**	**2**	**866**	**8.95**	**<.001**
trait__conf	164.53	52136	2	459	0.72	0.485
agreeableness	**122.69**	**15275**	**2**	**1572**	**6.31**	**0.002**
conscientious	52.38	16026	2	1572	2.57	0.077
extraversion	**170.10**	**26110**	**2**	**1572**	**5.12**	**0.006**
intellect	15.43	14751	2	1572	0.82	0.44
neuroticism	34.43	20723	2	1572	1.31	0.271
resilience__adapt	**28.38**	**1546**	**2**	**1572**	**14.43**	**<.001**
cope__distraction	**49.93**	**3688**	**2**	**1572**	**10.64**	**<.001**
cope__active	**40.60**	**3821**	**2**	**1572**	**8.35**	**<.001**
cope__denial	**21.58**	**1821**	**2**	**1572**	**9.31**	**<.001**
cope__substance	**43.55**	**3367**	**2**	**1572**	**10.17**	**<.001**
cope__emotsupp	**24.09**	**4812**	**2**	**1572**	**3.93**	**0.02**
cope__instrsupp	**22.62**	**4077**	**2**	**1572**	**4.36**	**0.013**
cope__disengage	**12.28**	**2697**	**2**	**1572**	**3.58**	**0.028**
cope__venting	6.51	3057	2	1572	1.68	0.188
cope__reframing	6.09	4418	2	1572	1.08	0.339
cope__planning	**99.77**	**3936**	**2**	**1572**	**19.92**	**<.001**
PHQ	104.67	62780	2	404	0.34	0.714
DASS__stress	32.69	11330	2	407	0.59	0.556
DASS__anxiety	71.98	7956	2	407	1.84	0.16
DASS__depression	6.81	11531	2	407	0.12	0.887
social__media__n	**20.36**	**2487**	**2**	**1572**	**6.44**	**0.002**
SourceCheck	**41.14**	**1886**	**2**	**1572**	**17.14**	**<.001**
CheckNews	**99.64**	**1564**	**2**	**1572**	**50.09**	**<.001**
official__sources	**16.45**	**1558**	**2**	**1572**	**8.3**	**<.001**
casual__sources	**46.66**	**1527**	**2**	**1572**	**24.01**	**<.001**
official__trust	**57.16**	**1517**	**2**	**1572**	**29.62**	**<.001**
casual__trust	**7.96**	**1566**	**2**	**1572**	**4**	**0.019**
gov__trust	**32.91**	**1541**	**2**	**1572**	**16.79**	**<.001**
conservatism	**93.09**	**9272**	**2**	**1572**	**7.89**	**<.001**
reactance	**2343.04**	**106168**	**2**	**1572**	**17.35**	**<.001**
cultural__tightloose	**183.83**	**21373**	**2**	**1572**	**6.76**	**0.001**
RWA	**76.67**	**8275**	**2**	**1572**	**7.28**	**0.001**
morality	59.38	4746	2	408	2.55	0.079
leave__going__to__work	**33.66**	**1278**	**2**	**937**	**12.34**	**<.001**
leave__walking__pet	1.13	1463	2	937	0.36	0.696
leave__physical__activity	**22.00**	**1343**	**2**	**937**	**7.68**	**<.001**
leave__get__food	**5.53**	**522**	**2**	**937**	**4.96**	**0.007**
leave__pharmacy	0.58	318	2	937	0.86	0.423
leave__medical__treatment	0.10	116	2	937	0.4	0.671
leave__care__dependents	**6.12**	**453**	**2**	**937**	**6.33**	**0.002**
leave__meet__friends__family	**44.23**	**353**	**2**	**937**	**58.67**	**<.001**
leave__religion	**2.38**	**75**	**2**	**934**	**14.88**	**<.001**
leave__bored	**55.29**	**1165**	**2**	**937**	**22.24**	**<.001**
leave__exercise__freedom	**81.51**	**737**	**2**	**937**	**51.8**	**<.001**
FinancialSit	**3.79**	**594**	**2**	**1572**	**5.02**	**0.007**
worksupportedworkinghome	**7.08**	**423**	**2**	**425**	**3.56**	**0.029**
businessokayworkinghome	2.68	90	2	90	1.34	0.267
NumberDeaths	4845789461934100.00	6240984855027569664	2	1534	0.6	0.551
PublicReact	**48.18**	**945**	**2**	**1534**	**39.11**	**<.001**
CovidLength	**49.31**	**3795**	**2**	**1534**	**9.97**	**<.001**
HouseholdNumber	**135.91**	**2981**	**2**	**1503**	**34.27**	**<.001**

Plots for variables with sig. difference between profiles

Error bars represent 95% confidence intervals

4.1.4.2 categorical variables
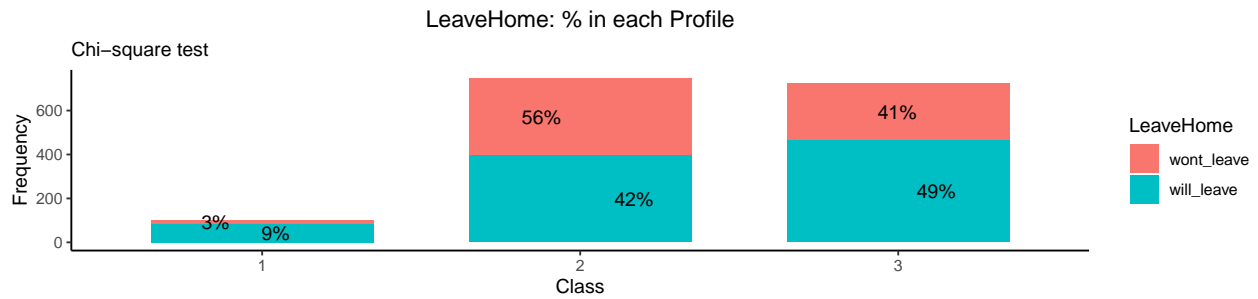
Table 13

Categorical variables (Chi-square): Differences between profiles on each variable outside model

var	df	chi_sq	p.value
Children	**2**	**27.26**	**<.001**
CountryLive	**6**	**157.48**	**<.001**
Elderly	2	0.24	0.885
ElderlyLive	2	0.69	0.71
Gender	2	5.58	0.061
Job	2	1.85	0.397
Layoff	2	2.44	0.295
LeaveHome	**2**	**37.55**	**<.001**
MaritalStatus	**6**	**117.78**	**<.001**
Workessential	**4**	**12.84**	**0.012**

Children: % in each Profile

Children
- have_kids
- no_kids

CountryLive: % in each Profile

CountryLive
- Australia
- Canada
- UK
- US

LeaveHome: % in each Profile

LeaveHome
- wont_leave
- will_leave

MaritalStatus: % in each Profile

MaritalStatus
- married
- de_facto
- separated
- single

Workessential: % in each Profile

Workessential
- Essential
- Non−essential
- Unsure
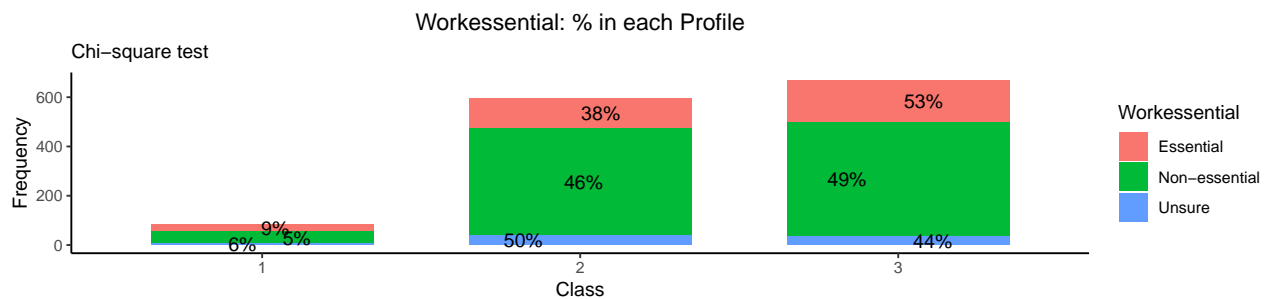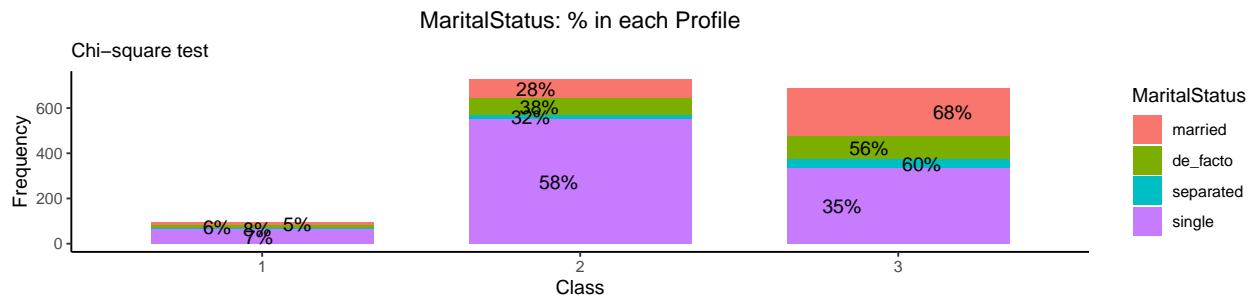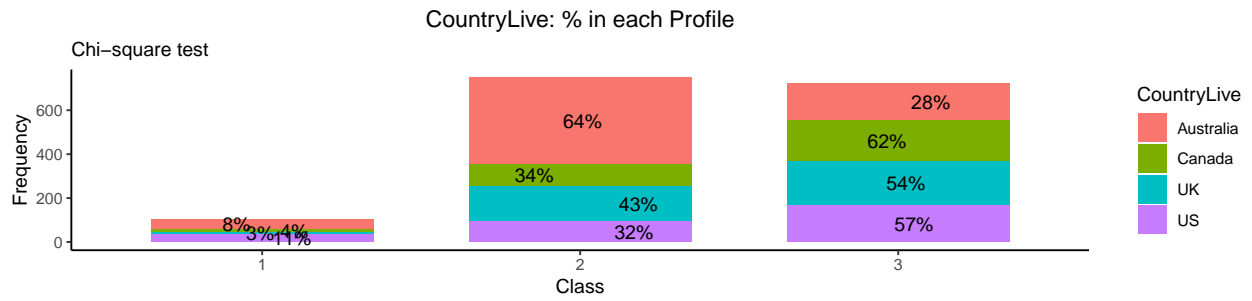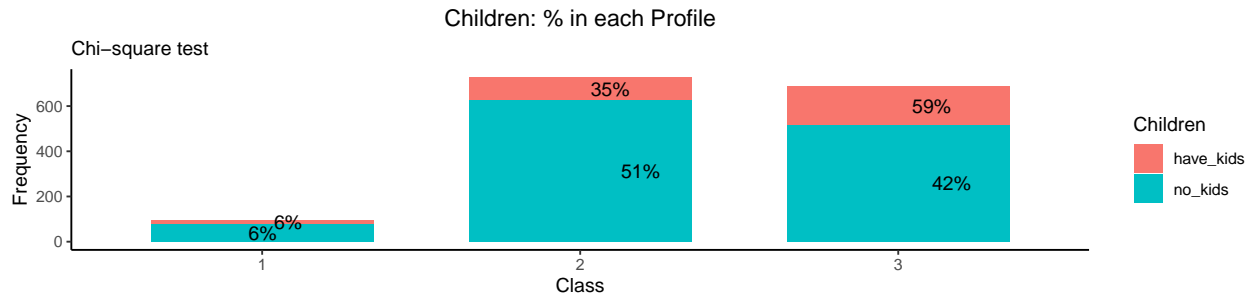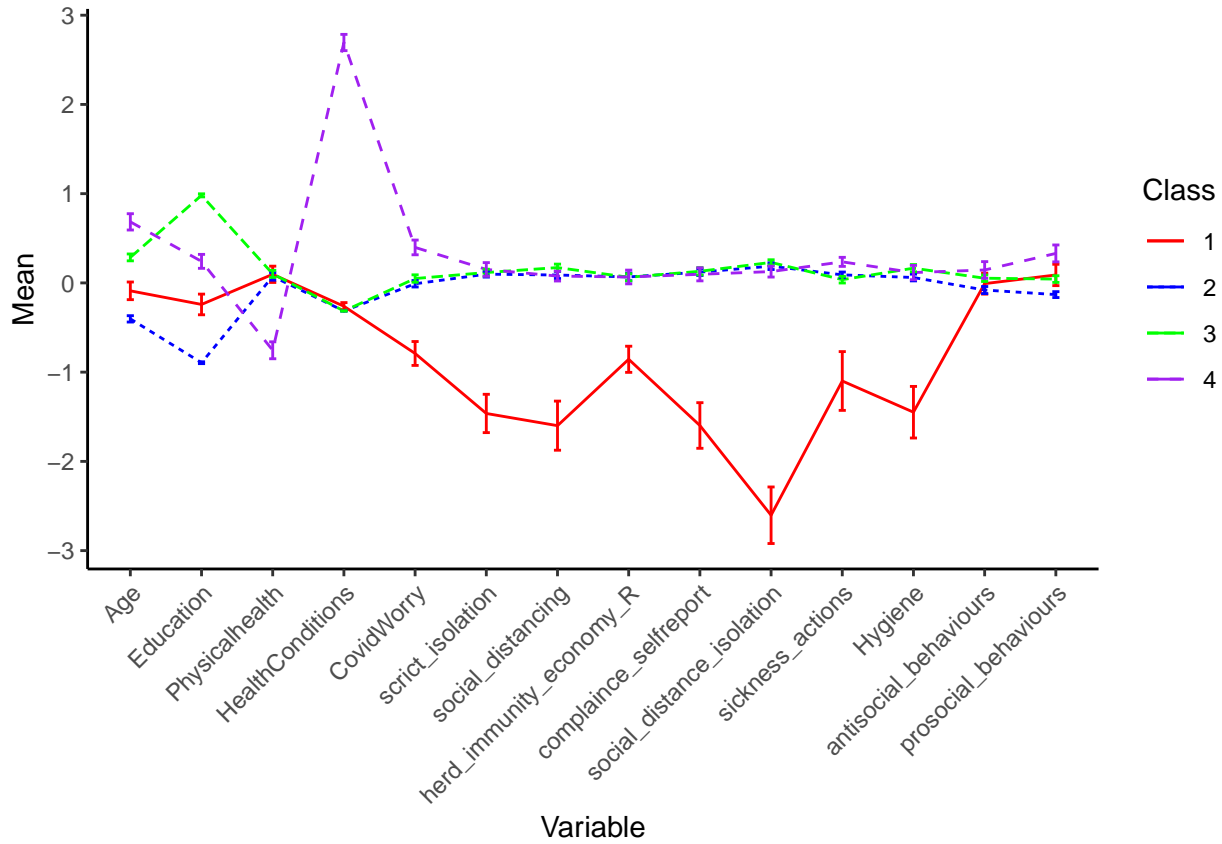
Table 14

Categorical variables (Fisher's exact): Differences between profiles on each variable outside model

var	p.value
LossofJob	0.764
Wherework	**<.001**

Wherework: % in each Profile

Fisher's exact test

5 4 profile model

5.1 Latent profile membership

5.1.1 Overall membership

Table 15
Number and percent of participants in each profile

	1	2	3	4	total
n	112	677	623	163	1575
percent	7	43	40	10	100

5.1.2 Country membership

Table 16
Number of participants from each country in each profile

CountryLive	1	2	3	4	total
Australia	50	363	149	47	609
Canada	12	92	161	38	303
UK	14	140	175	37	366
US	36	82	138	41	297

5.1.3 Gender membership

Table 17

Number of participants from each gender in each profile

Gender	1	2	3	4	total
1	53	231	221	47	552
2	59	446	402	116	1023

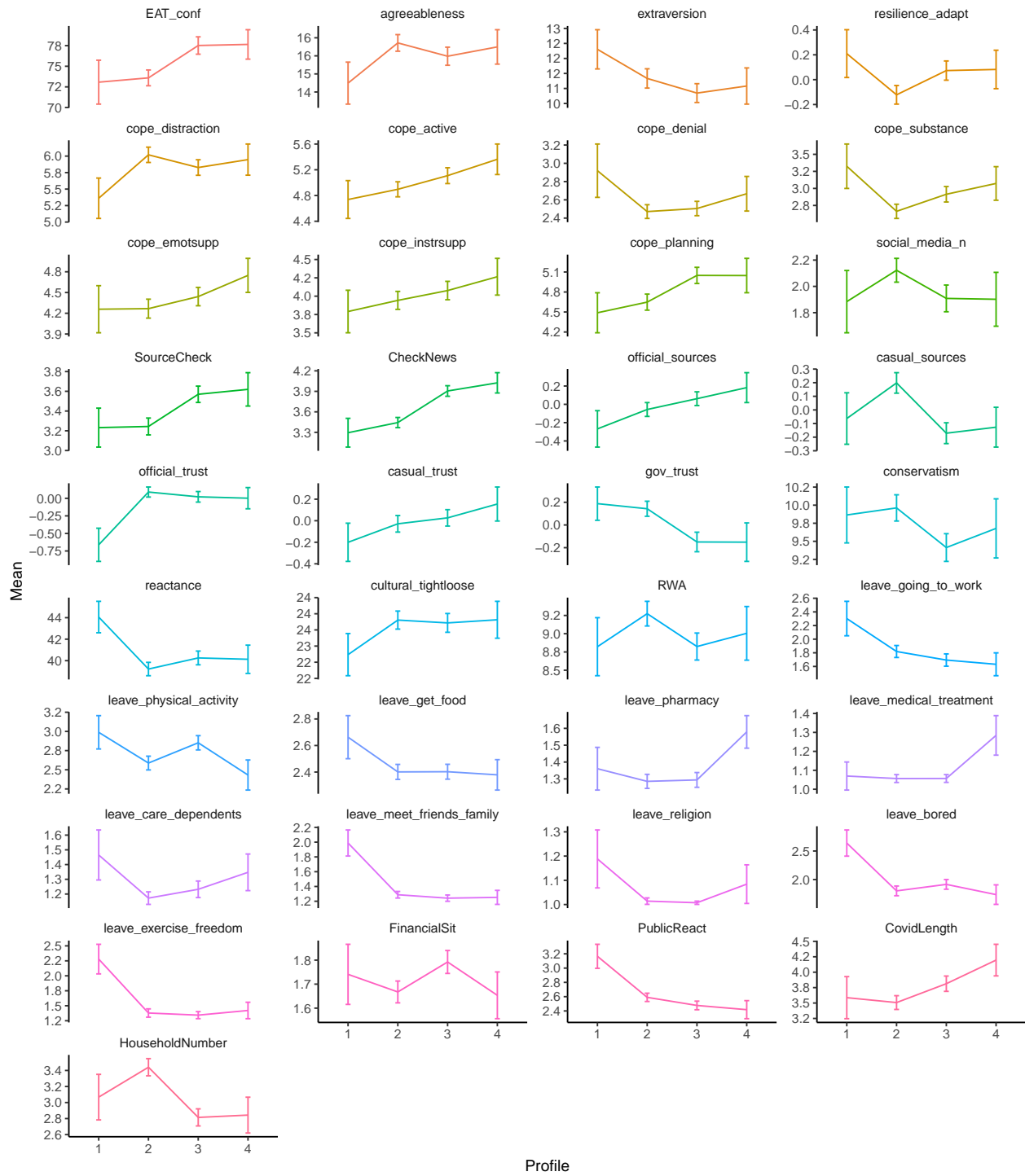### 5.1.4 Differences on out of model variables

5.1.4.1 Ordinal/Continuous variables

Table 18

Ordinal/continuous variables: Differences between profiles on each variable outside model

var	SSB	SSW	dfB	dfW	F	p.value
CRT_acc	5276.7	515944	3	460	1.57	0.196
belief_acc	4688.4	408019	3	458	1.75	0.155
EAT_acc	2517.8	324774	3	863	2.23	0.083
CRT_conf	1497.0	130047	3	460	1.76	0.153
belief_conf	8.3	37368	3	458	0.03	0.992
EAT_conf	**3367.6**	**145442**	**3**	**865**	**6.68**	**<.001**
trait_conf	173.7	52127	3	458	0.51	0.676
agreeableness	**137.3**	**15261**	**3**	**1571**	**4.71**	**0.003**
conscientious	52.6	16026	3	1571	1.72	0.161
extraversion	**228.6**	**26052**	**3**	**1571**	**4.6**	**0.003**
intellect	10.6	14756	3	1571	0.38	0.77
neuroticism	28.4	20729	3	1571	0.72	0.542
resilience_adapt	**19.4**	**1555**	**3**	**1571**	**6.54**	**<.001**
cope_distraction	**45.7**	**3692**	**3**	**1571**	**6.48**	**<.001**
cope_active	**43.3**	**3819**	**3**	**1571**	**5.94**	**<.001**
cope_denial	**22.6**	**1820**	**3**	**1571**	**6.51**	**<.001**
cope_substance	**59.5**	**3351**	**3**	**1571**	**9.29**	**<.001**
cope_emotsupp	**34.7**	**4802**	**3**	**1571**	**3.79**	**0.01**
cope_instrsupp	**21.7**	**4078**	**3**	**1571**	**2.79**	**0.039**
cope_disengage	11.3	2698	3	1571	2.19	0.088
cope_venting	11.7	3052	3	1571	2.01	0.11
cope_reframing	6.1	4418	3	1571	0.73	0.536
cope_planning	**72.8**	**3963**	**3**	**1571**	**9.62**	**<.001**
PHQ	444.1	62441	3	403	0.96	0.414
DASS_stress	18.4	11345	3	406	0.22	0.883
DASS_anxiety	54.1	7974	3	406	0.92	0.432
DASS_depression	91.7	11446	3	406	1.08	0.355
social_media_n	**18.5**	**2489**	**3**	**1571**	**3.89**	**0.009**
SourceCheck	**45.3**	**1882**	**3**	**1571**	**12.62**	**<.001**
CheckNews	**105.6**	**1558**	**3**	**1571**	**35.49**	**<.001**
official_sources	**18.0**	**1556**	**3**	**1571**	**6.06**	**<.001**
casual_sources	**47.9**	**1526**	**3**	**1571**	**16.43**	**<.001**
official_trust	**54.8**	**1519**	**3**	**1571**	**18.9**	**<.001**
casual_trust	**9.4**	**1565**	**3**	**1571**	**3.15**	**0.024**
gov_trust	**35.5**	**1538**	**3**	**1571**	**12.09**	**<.001**
conservatism	**100.5**	**9264**	**3**	**1571**	**5.68**	**0.001**
reactance	**2292.8**	**106219**	**3**	**1571**	**11.3**	**<.001**
cultural_tightloose	**114.1**	**21443**	**3**	**1571**	**2.79**	**0.04**
RWA	**71.8**	**8280**	**3**	**1571**	**4.54**	**0.004**
morality	79.3	4726	3	407	2.27	0.079
leave_going_to_work	**29.0**	**1283**	**3**	**936**	**7.05**	**<.001**
leave_walking_pet	3.0	1461	3	936	0.64	0.587
leave_physical_activity	**27.3**	**1337**	**3**	**936**	**6.38**	**<.001**
leave_get_food	**5.5**	**522**	**3**	**936**	**3.27**	**0.021**
leave_pharmacy	**7.2**	**311**	**3**	**936**	**7.2**	**<.001**
leave_medical_treatment	**4.4**	**111**	**3**	**936**	**12.27**	**<.001**
leave_care_dependents	**7.1**	**452**	**3**	**936**	**4.9**	**0.002**
leave_meet_friends_family	**41.6**	**356**	**3**	**936**	**36.48**	**<.001**
leave_religion	**2.7**	**74**	**3**	**933**	**11.25**	**<.001**
leave_bored	**52.6**	**1168**	**3**	**936**	**14.06**	**<.001**
leave_exercise_freedom	**65.6**	**753**	**3**	**936**	**27.19**	**<.001**
FinancialSit	**5.9**	**592**	**3**	**1571**	**5.21**	**0.001**
worksupportedworkinghome	5.5	425	3	424	1.83	0.141
businessokayworkinghome	2.8	90	3	89	0.92	0.433
NumberDeaths	6263881643480407.0	6239566762846023680	3	1533	0.51	0.673
PublicReact	**47.8**	**945**	**3**	**1533**	**25.84**	**<.001**
CovidLength	**72.7**	**3771**	**3**	**1533**	**9.85**	**<.001**
HouseholdNumber	**134.5**	**2982**	**3**	**1502**	**22.59**	**<.001**

Plots for variables with sig. difference between profiles

Error bars represent 95% confidence intervals

5.1.4.2 categorical variables

Table 19

Categorical variables (Chi-square): Differences between profiles on each variable outside model

var	df	chi_sq	p.value
Children	**3**	**22.3**	**<.001**
CountryLive	**9**	**157.9**	**<.001**
Elderly	3	1.3	0.738
ElderlyLive	3	2.0	0.574
Gender	**3**	**10.5**	**0.015**
Job	3	2.6	0.463
Layoff	3	2.8	0.432
LeaveHome	**3**	**35.9**	**<.001**
MaritalStatus	**9**	**153.2**	**<.001**
Workessential	**6**	**13.3**	**0.039**

Children: % in each Profile

Chi−square test

CountryLive: % in each Profile

Chi−square test

Gender: % in each Profile

Chi−square test

LeaveHome: % in each Profile

Chi−square test

MaritalStatus: % in each Profile

Chi−square test

Workessential: % in each Profile

Chi−square test
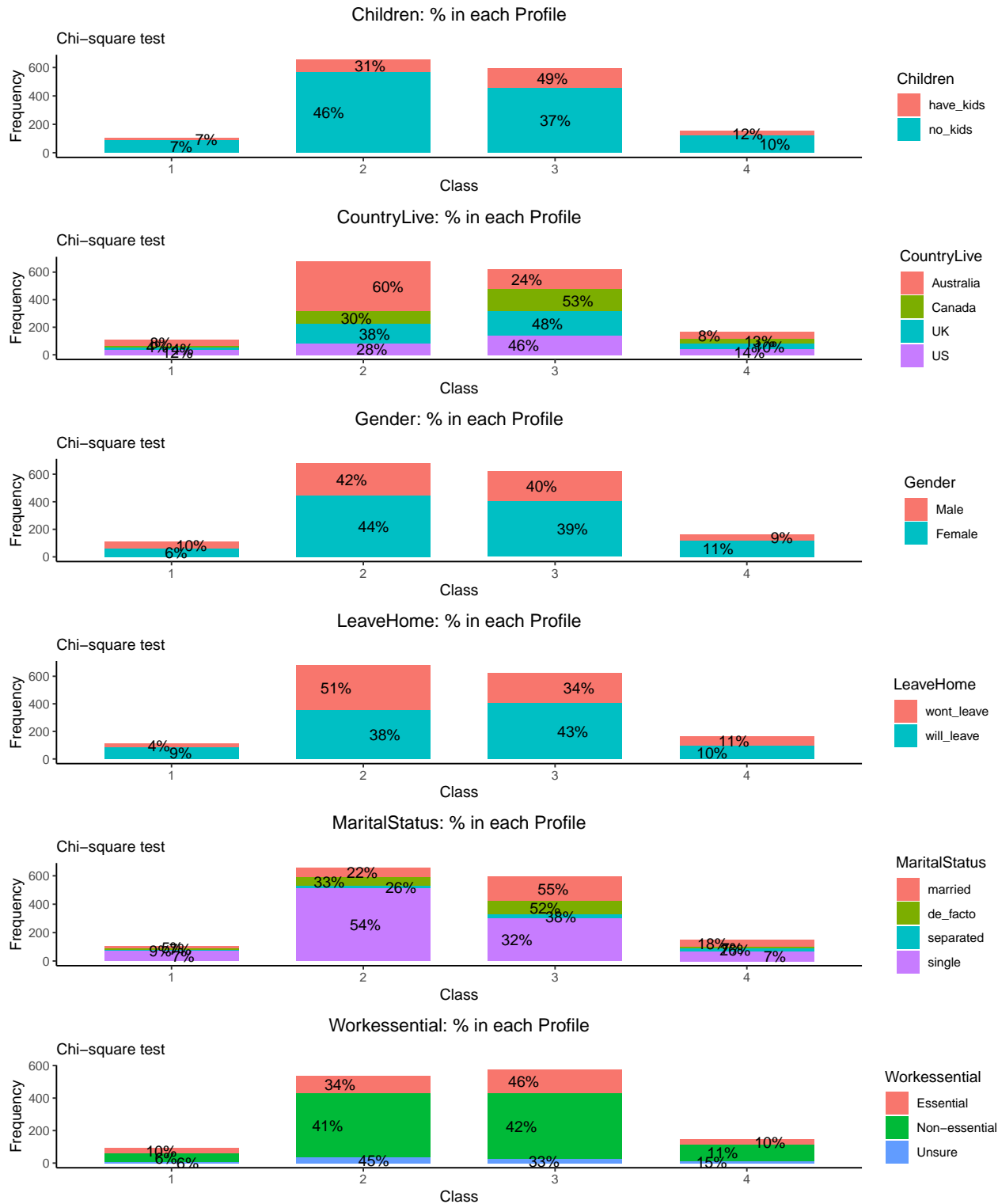
Table 20

Categorical variables (Fisher's exact): Differences between profiles on each variable outside model

var	p.value
LossofJob	0.945
Wherework	**<.001**

Wherework: % in each Profile
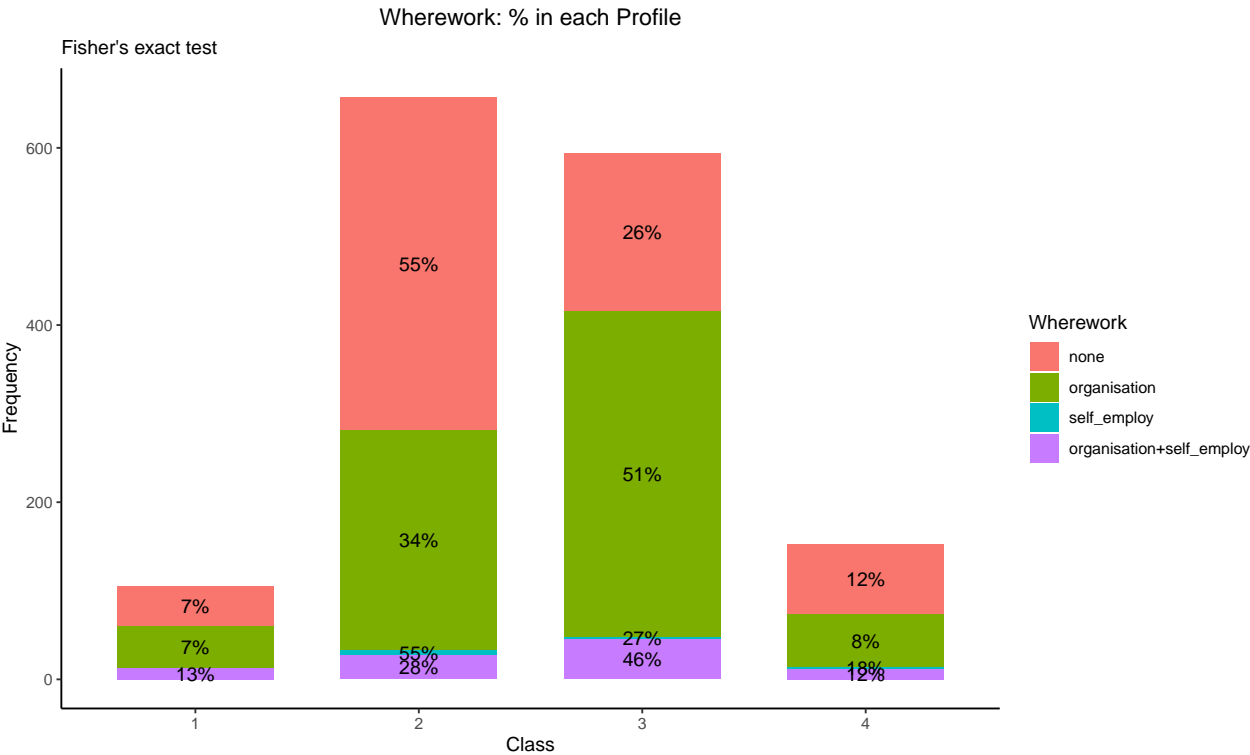
6 List of goodness of fit indices

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).