

An R Markdown program to analyse responses to a Discrete Choice Experiment (DCE) survey exploring the online help seeking preferences of socially anxious young people

Results Summary

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```

make_mdl_smry <- function(model_mdl,
                           return_1L_chr = "coefficients"){
  smry_ls <- summary(model_mdl)
  if("gmn1" %in% class(model_mdl) #starts with(deparse(smry_ls$call)[1], "gmn1")
    ){
    smry_ls <- gmn1::getSummary.gmn1(model_mdl)
    coef_mat <- smry_ls$coef
    perf_tb <- smry_ls$sumstat %>% purrr::discard(is.na) %>% as.data.frame() %>% tibble::rownames_to_column("Statistic") %>%
      tibble::as_tibble() %>% dplyr::rename(Value = ".")
    p_var_nm_1L_chr <- "p"
  }else{
    coef_mat <- smry_ls$CoefTable
    perf_tb <- tibble::tibble(Statistic = c("logLik", "AIC", "BIC", "N"),
                               Value = c(smry_ls$logLik, AIC(model_mdl), BIC(model_mdl), smry_ls$freq %>% sum()))
    p_var_nm_1L_chr <- "Pr(>|z|)"
  }
  call_1L_chr <- smry_ls$call %>% deparse() %>% paste0(collapse = "") %>% stringr::str_squish()
  coef_tb <- coef_mat %>% as.data.frame() %>% tibble::rownames_to_column("Parameter") %>%
    tibble::as_tibble() %>% dplyr::mutate(sign = cut(!rlang::sym(p_var_nm_1L_chr), breaks = c(-Inf, 0.001, 0.01, 0.05, 0.1, Inf),
                                                labels = c("***", "**", "*", ".", "n.s."), right = FALSE))

  if(return_1L_chr == "coefficients")
    return_xx <- coef_tb
  if(return_1L_chr == "performance")
    return_xx <- perf_tb %>%
      dplyr::filter(!is.na(Value))
  if(return_1L_chr == "call")
    return_xx <- call_1L_chr
  return(return_xx)
}

```

1 Data processing

The raw dataset, that included records for each time any participant began viewing the online survey had 901 records.

When we dropped all records for which there were zero responses to the choice card questions, the number of records was 254.

A total of 63 cases had at least one red flag assigned to them as a result of data integrity checks.

Table 1: Frequency of red flags from data integrity checks

Number of Red Flags	Frequency
0	191
1	35
2	15
3	10
4	3

Of the 107 red flags assigned to these cases, 21 were added from the qualitative assessment of participant free text responses, with the balance being flags generated by automated checks of country of origin, inconsistencies between age and date of birth data, email addresses with five or greater consecutive numeric digits, duplicate free text entries across cases and survey completion times of under five minutes.

Table 2: Types of red flags

Outcome	N
red_flag_country_lgl	15
red_flag_reported_age_lgl	36
red_flag_email_lgl	19
red_flag_duplicate_txt_var1_lgl	7
red_flag_qltv_ax_lgl	21
red_flag_attempt_dur_lgl	9
red_flag_count_int	107

In 36 cases the red flags generated by automated assessments were not in conflict with qualitative assessment (ie the qualitative assessment either also assigned a red flag or did not assign a green flag). These confirmed red flagged records were excluded along with an additional 2 records that were red flagged by the qualitative assessment but which had no automatically generated red flags. In 25 cases, red-flags added by the automated assessment were in conflict with green flags added by the qualitative assessment - these records were retained. In total, the qualitative assessment assigned a total of 210 green flags to confirm records for inclusion.

Table 3: Qualitative and automated assessment summary

Outcome	N
over_rf_threshold_lgl	63
green_flag_qltv_ax_lgl	210

qltv_force_in_lgl	25
qltv_force_out_lgl	2
exluded_by_alg_lgl	36

After dropping records arising from the data integrity checks, 216 records remained.

When these records were combined with the choice cards dataset and that merged dataset reshaped to long format (each case being a unique combination of the 3 alternatives for each of 15 choice situations presented to each individual participant) the number of records expanded to 9720.

2 Descriptives

2.1 Participant characteristics

Table 4: Participant Characteristics

Concept	Measure	n=216	Units
Age	Mean (SD)	19.745 (3.144)	
	Median	19	
	Minimum - Maximum	15 - 25	
	IQR (CV)	6 (0.159)	
	Missing	0 (0.0%)	
	Aged 20-25	107 (49.5%)	
	Aged 15-19	109 (50.5%)	
	Missing	0 (0.0%)	
Gender	Female	100 (46.3%)	
	Male	104 (48.1%)	
	Other	8 (3.7%)	
	Prefer_NTS	4 (1.9%)	
	Missing	0 (0.0%)	
SIAS	Mean (SD)	48.903 (14.199)	
	Median	50	
	Minimum - Maximum	10 - 77	
	IQR (CV)	18 (0.29)	
	Missing	0 (0.0%)	
	Normal_Range	29 (13.4%)	
	Social_Phobia	32 (14.8%)	
	Social_Anxiety	155 (71.8%)	
	Missing	0 (0.0%)	

Area disadvantage	SEIFA Quartile 1	25 (11.7%)
	SEIFA Quartile 2	50 (23.4%)
	SEIFA Quartile 3	53 (24.8%)
	SEIFA Quartile 4	86 (40.2%)
	Missing	2 (0.9%)
Urbanicity	Major Urban	173 (80.5%)
	Other Urban	1 (0.5%)
	Rural Balance	41 (19.1%)
	Missing	1 (0.5%)
	Resides in a rural or remote area	42 (19.4%)
	Resides in an urban area	174 (80.6%)
	Missing	0 (0.0%)
Jurisdiction	Australian Capital Territ	5 (2.3%)
	New South Wales	76 (35.3%)
	Queensland	22 (10.2%)
	South Australia	18 (8.4%)
	Tasmania	5 (2.3%)
	Victoria	73 (34.0%)
	Western Australia	16 (7.4%)
	Missing	1 (0.5%)
Pilot participant	Responded to public advertisement	183 (85.1%)
	Entourage pilot programme participant	32 (14.9%)
	Missing	1 (0.5%)
	Mean (SD)	0 (0)
	Median	0
	Minimum - Maximum	0 - 0
	IQR (CV)	0 (-)

Incomplete choice tasks	Missing	0 (0.0%)	
	Completed all choice tasks	216 (100.0%)	
	Missing	0 (0.0%)	
Time taken	Mean (SD)	2083.676 (7053.325)	seconds
	Median	845.5	seconds
	Minimum - Maximum	167 - 63340	seconds
	IQR (CV)	729.5 (3.385)	seconds
	Missing	0 (0.0%)	
	Took at least ten minutes to complete survey	150 (69.4%)	
	Completed survey in under ten minutes	66 (30.6%)	
	Missing	0 (0.0%)	

2.2 Representativeness of sample

Table 5: Sample age proportions compared to official population estimates

Age range	n	Sample (per-cent)	CI_95_Lower	CI_95_Upper	Population (per-cent)	p	p.signif
15-19	109	50.46296	43.59770	57.31535	41.39885	0.0085141	**
20-25	107	49.53704	42.68465	56.40230	58.60115	0.0085141	**

Table 6: Sample resident jurisdictions proportions compared to age and sex based official population estimates

Jurisdiction	n	Sample (per-cent)	CI_95_Lower	CI_95_Upper	Population (per-cent)	p	p.signif
Australian Capital Territory	5	2.325581	0.759324	5.343395	2.014026	0.6267139	ns
New South Wales	76	35.348837	28.968538	42.139445	31.420678	0.2125593	ns
Northern Territory	0	0.000000	0.000000	1.701123	1.047619	0.1811498	ns
Queensland	22	10.232558	6.524559	15.081852	20.255360	0.0001197	***
South Australia	18	8.372093	5.037320	12.908800	6.764072	0.3403071	ns
Tasmania	5	2.325581	0.759324	5.343395	2.030695	0.6292975	ns
Victoria	73	33.953488	27.652273	40.704276	26.417747	0.0162080	*
Western Australia	16	7.441860	4.313300	11.803925	10.036652	0.2550859	ns

Table 7: Sample area disadvantage proportions compared to expected proportions

SEIFA Disadvantage Quartile	n	Sample (per-cent)	CI_95_Lower	CI_95_Upper	Population (per-cent)	p	p.signif
SEIFA Quartile 1	25	11.68224	7.704559	16.76083	25	0.0000017	****
SEIFA Quartile 2	50	23.36449	17.866690	29.61600	25	0.6359316	ns
SEIFA Quartile 3	53	24.76636	19.135861	31.11021	25	1.0000000	ns
SEIFA Quartile 4	86	40.18692	33.561812	47.08784	25	0.0000011	****

Table 8: Sample urbanicity proportions compared to age and sex
based official population estimates

Resides in urban area	n	Sample (per-cent)	CI_95_Lower	CI_95_Upper	Population (per-cent)	p	p.signif
FALSE	42	19.44444	14.38789	25.36037	8.483811	5e-07	****
TRUE	174	80.55556	74.63963	85.61211	91.296643	8e-07	****

2.3 Choice responses

2.3.1 Outcomes Attribute

Table 9: Outcomes attribute choice responses

Outcomes	Freq
Addresses current symptoms	680
Addresses current symptoms and provides knowledge and skills to manage future situations	905
Provides knowledge and skills to manage future situations	962

Choices made by respondents according to Outcomes attribute

$\chi^2_{\text{Ind}}[2]=201.54$, Cramer's $V=0.18$, $p<0.001$, $BF_{10}=6.25226769924497\text{e}+41$, $N=6480$, missing= l

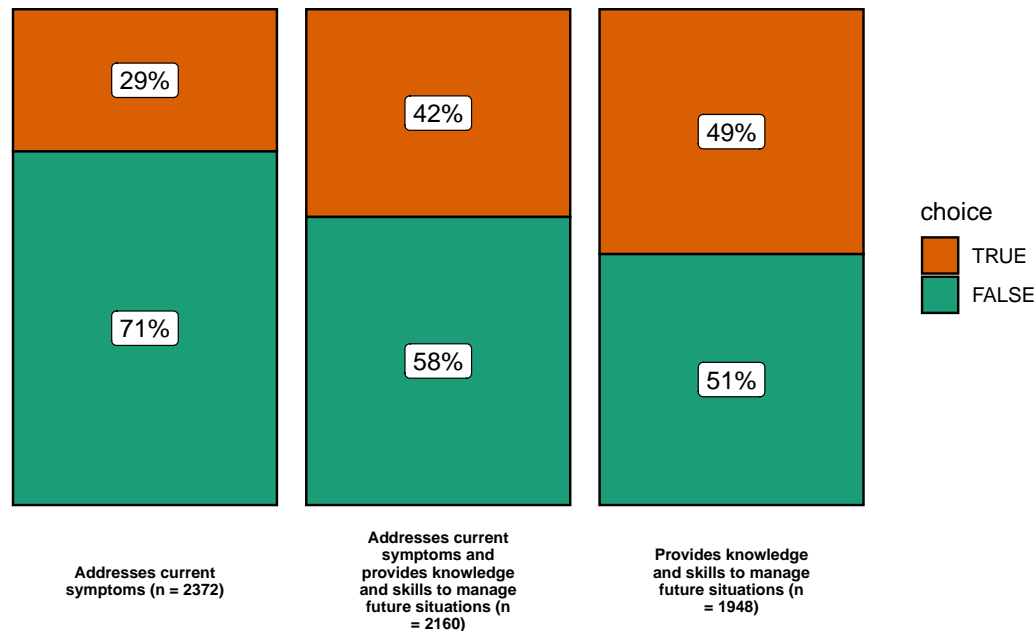


Figure 1: Outcomes attribute

2.3.2 Information sharing Attribute

Table 10: Information sharing attribute choice responses

Information_sharing	Freq
Information is shared with your treating clinician based on settings you control	1048
Information is shared with your treating clinician in accordance with app policy	510
No information is shared with your treating clinician	989

Choices made by respondents according to Information_sharing attribute

$\chi^2_{\text{Ind}}[2]=274.28$, Cramer's $V=0.21$, $p<0.001$, $\text{BF}_{10}=1.34531409987521\text{e}+59$, $N=6480$, missing= t

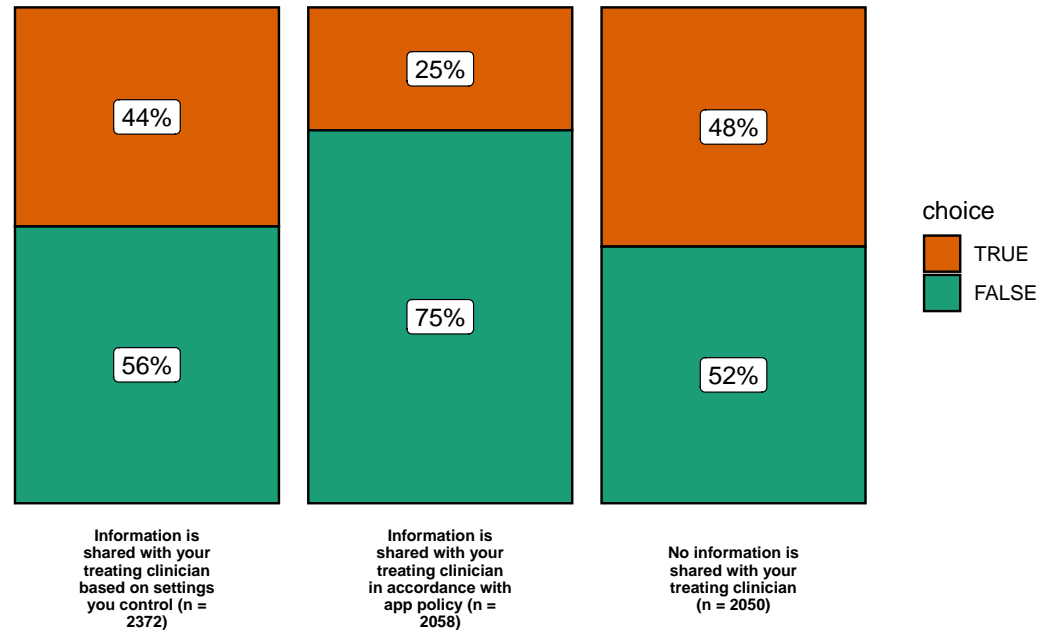


Figure 2: Information sharing attribute

2.3.3 Social Attribute

Table 11: Social attribute choice responses

Social	Freq
Discussions with other app users moderated by both trained peers and mental health clinicians	562
Discussions with other app users moderated by mental health clinicians	429
Discussions with other app users moderated by trained peers	472
No discussions with other app users	662
Unmoderated discussions with other app users	422

Choices made by respondents according to Social attribute

$\chi^2_{\text{Ind}}[4]=144.54$, Cramer's $V=0.15$, $p<0.001$, $BF_{10}=3.2242180449261\text{e}+26$, $N=6480$, missing=0

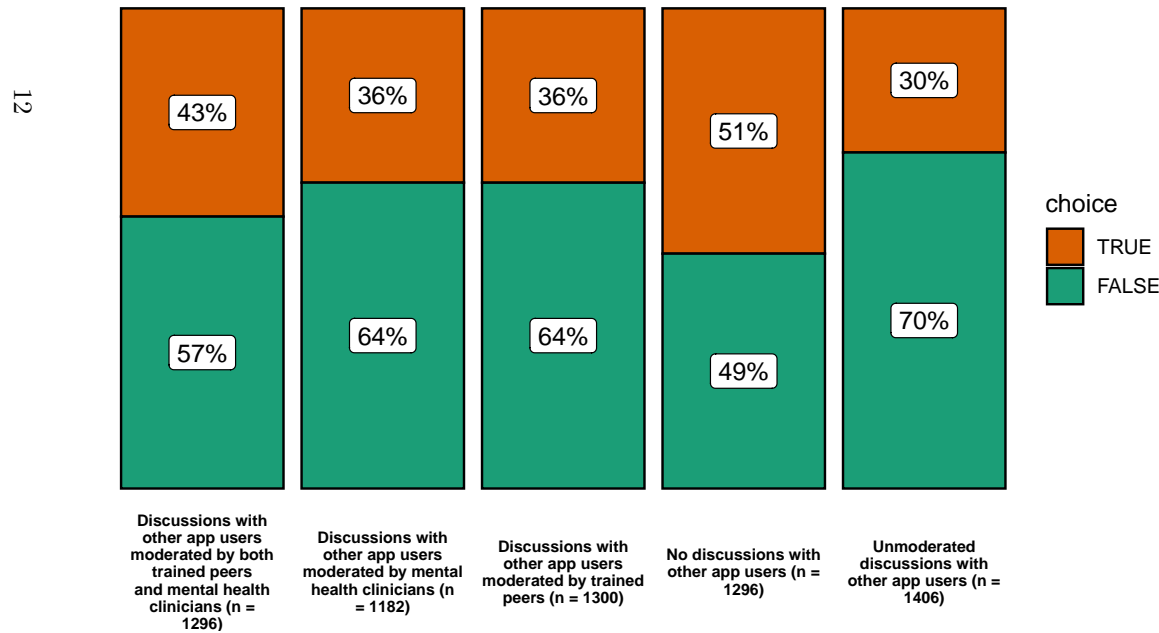


Figure 3: Social attribute

2.3.4 Endorsers Attribute

Table 12: Endorsers attribute choice responses

Endorsers	Freq
App has no endorsers	773
App is endorsed by respected non experts	754
App is endorsed by youth mental health experts	1020

Choices made by respondents according to Endorsers attribute

$\chi^2_{\text{Ind}}[2]=48.08$, Cramer's $V=0.09$, $p<0.001$, $BF_{10}=63409551.81$, $N=6480$, missing=0

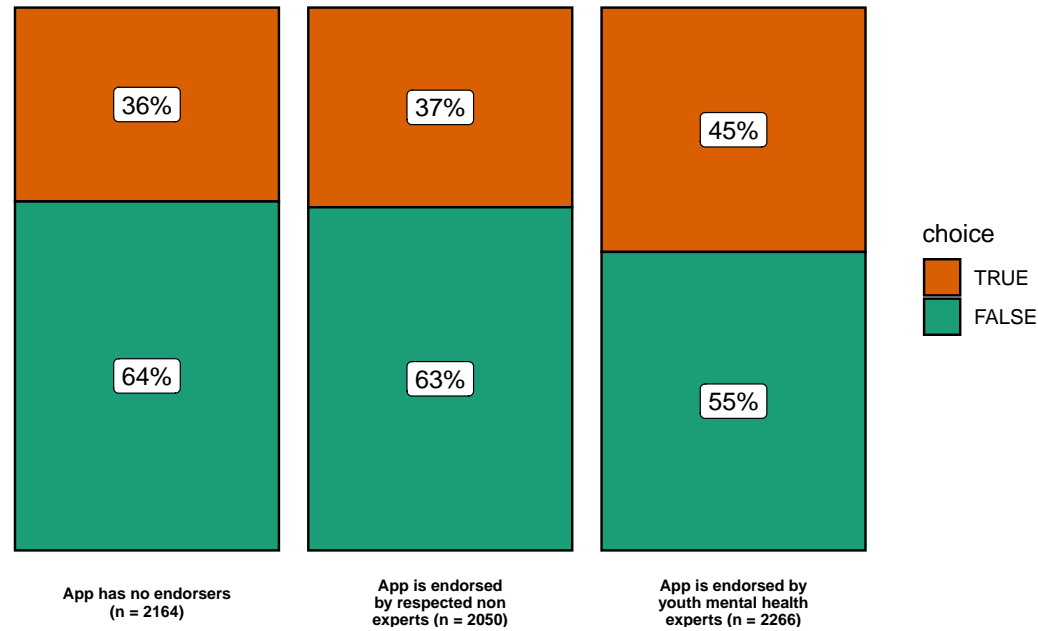


Figure 4: Endorsers attribute

2.3.5 Cost Attribute

Table 13: Cost attribute choice responses

Cost	Freq
0	1513
5	515
15	132
30	133
60	254

Choices made by respondents according to Cost attribute

$\chi^2_{\text{Ind}}[4]=1010.54$, Cramer's $V=0.39$, $p=< 0.001$, $BF_{10}=3.4424282199768e+223$, $N=6480$

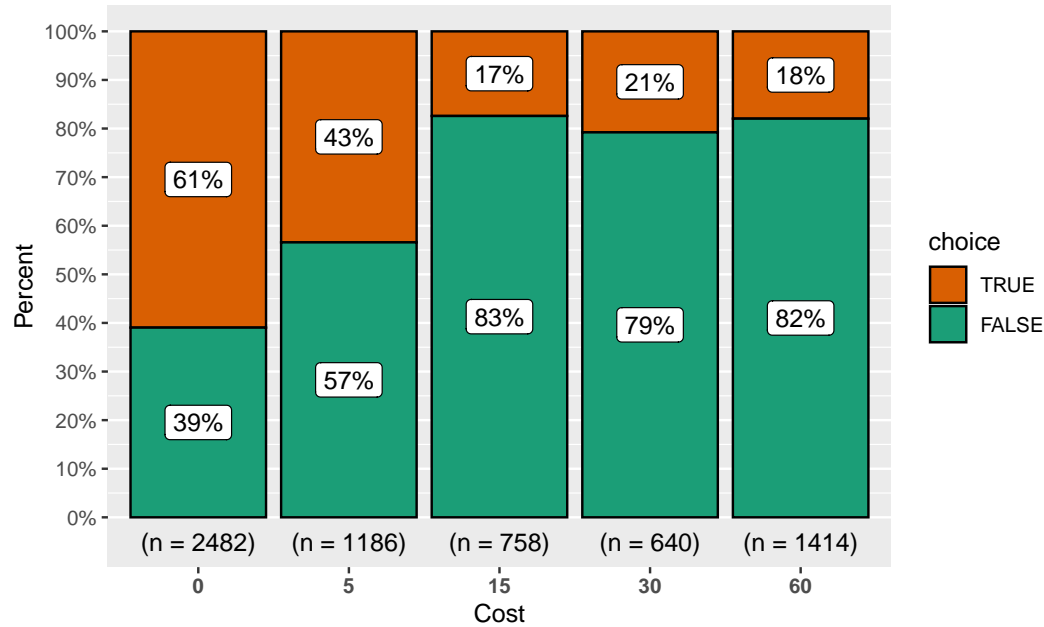


Figure 5: Cost attribute

2.3.6 Opt out alternative

Table 14: Opt out alternative responses

opt_out	Freq
0	2547
1	693

Choices made by respondents according to opt-out alternative

$\chi^2_{\text{ind}}[1]=311.21$, $\Phi=0.18$, $p=< 0.001$, $\text{BF}_{10}=1.76253705603828\text{e}+69$, $N=9720$, missing

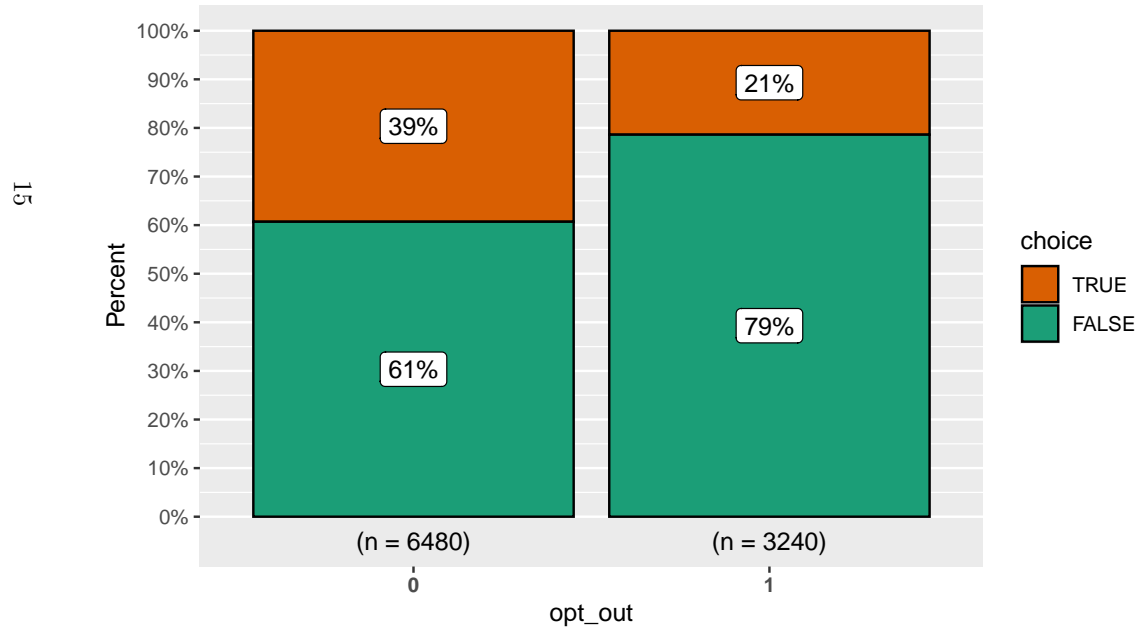


Figure 6: Opt out alternativee

3 Models

3.1 Models of how social anxiety app attributes shape the choice behaviour of young people

Table 15: Multinomial Logit Model (estimated with gmn1 package)

Parameter	est	se	stat	p	lwr	upr	sign
opt_out	-0.9159175	0.0978442	-9.3609823	0.0000000	-0.7241465	-1.1076885	***
Outcomes_curr_sym	-0.3001924	0.0683170	-4.3941068	0.0000111	-0.1662934	-0.4340913	***
Outcomes_curr_sym_future_sit	0.2321426	0.0681290	3.4073955	0.0006559	0.3656730	0.0986121	***
Information_sharing_app_policy	-0.0699129	0.0826282	-0.8461143	0.3974890	0.0920354	-0.2318611	n.s.
Information_sharing_user_settings	0.2489098	0.0633325	3.9302048	0.0000849	0.3730393	0.1247803	***
Social_unmod_disc	-0.2723511	0.0941473	-2.8928174	0.0038180	-0.0878257	-0.4568765	**
Social_trained_peer_mod	0.3063949	0.0945210	3.2415532	0.0011888	0.4916527	0.1211371	**
Social_clinician_mod	0.2900678	0.0907857	3.1950828	0.0013979	0.4680045	0.1121311	**
Social_peer_clinician_mod	0.5122196	0.0905456	5.6570368	0.0000000	0.6896857	0.3347536	***
Endorsers_non_expert	0.2496434	0.0666382	3.7462535	0.0001795	0.3802518	0.1190350	***
Endorsers_expert	0.6956661	0.0627859	11.0799731	0.0000000	0.8187242	0.5726080	***
Cost	-0.0434838	0.0019235	-22.6066445	0.0000000	-0.0397139	-0.0472538	***

Note:

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Table 16: Performance of Multinomial Logit Model (estimated with gmn1 package)

Statistic	Value
logLik	-2845.168
AIC	5714.337
BIC	5787.337
N	3240.000

Table 17: Multinomial Logit Model (estimated with mlogit package)

Parameter	Estimate	Std. Error	z-value	Pr(> z)	sign
opt_out	-0.9159175	0.0978442	-9.3609822	0.0000000	***
Outcomes_curr_sym	-0.3001924	0.0683170	-4.3941068	0.0000111	***
Outcomes_curr_sym_future_sit	0.2321426	0.0681290	3.4073955	0.0006559	***
Information_sharing_app_policy	-0.0699129	0.0826282	-0.8461143	0.3974890	n.s.
Information_sharing_user_settings	0.2489098	0.0633325	3.9302048	0.0000849	***
Social_unmod_disc	-0.2723511	0.0941473	-2.8928174	0.0038180	**
Social_trained_peer_mod	0.3063949	0.0945210	3.2415532	0.0011888	**
Social_clinician_mod	0.2900678	0.0907857	3.1950828	0.0013979	**
Social_peer_clinician_mod	0.5122196	0.0905456	5.6570368	0.0000000	***
Endorsers_non_expert	0.2496434	0.0666382	3.7462535	0.0001795	***
Endorsers_expert	0.6956661	0.0627859	11.0799731	0.0000000	***
Cost	-0.0434838	0.0019235	-22.6066445	0.0000000	***

Note:

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Table 18: Performance of Multinomial Logit Model (estimated with mlogit package)

Statistic	Value
logLik	-2845.168
AIC	5714.337
N	3240.000

3.2 Models of the heterogeneity of young people's preferences for social anxiety apps

Table 19: Mixed Logit Model (estimated with gmn1 package)

Parameter	est	se	stat	p	lwr	upr	sign
opt_out	-1.7285178	0.2047389	-8.4425487	0.0000000	-1.3272370	-2.1297985	***
Outcomes_curr_sym	-0.5394218	0.1104277	-4.8848411	0.0000010	-0.3229875	-0.7558562	***
Outcomes_curr_sym_future_sit	0.1174913	0.1214279	0.9675807	0.3332538	0.3554856	-0.1205030	n.s.
Information_sharing_app_policy	-0.2866755	0.1616776	-1.7731314	0.0762069	0.0302066	-0.6035577	.
Information_sharing_user_settings	0.4085120	0.1179745	3.4627147	0.0005348	0.6397378	0.1772863	***
Social_unmod_disc	-0.4300076	0.1562048	-2.7528444	0.0059080	-0.1238518	-0.7361635	**
Social_trained_peer_mod	0.2216966	0.1572669	1.4096842	0.1586330	0.5299341	-0.0865408	n.s.
Social_clinician_mod	0.3404081	0.1476301	2.3058175	0.0211208	0.6297578	0.0510584	*
Social_peer_clinician_mod	0.5110139	0.1487906	3.4344503	0.0005938	0.8026381	0.2193897	***
Endorsers_non_expert	0.2969256	0.0978352	3.0349564	0.0024057	0.4886791	0.1051721	**
Endorsers_expert	1.0468801	0.1127855	9.2820477	0.0000000	1.2679356	0.8258247	***
Cost	-0.0943227	0.0069617	-13.5488606	0.0000000	-0.0806781	-0.1079673	***
sd.Cost.Cost	-2.6959964	0.2503604	-10.7684637	0.0000000	-2.2052991	-3.1866937	***
sd.Cost.Outcomes_curr_sym	-0.6632696	0.1354690	-4.8960969	0.0000010	-0.3977551	-0.9287840	***
sd.Cost.Outcomes_curr_sym_future_sit	-1.1360923	0.1495849	-7.5949668	0.0000000	-0.8429113	-1.4292734	***
sd.Cost.Information_sharing_app_policy	-1.2233279	0.1917177	-6.3808824	0.0000000	-0.8475682	-1.5990876	***
sd.Cost.Information_sharing_user_settings	-0.8585465	0.1396228	-6.1490403	0.0000000	-0.5848908	-1.1322023	***
sd.Cost.Social_unmod_disc	-0.0563617	0.1939019	-0.2906712	0.7713028	0.3236791	-0.4364025	n.s.
sd.Cost.Social_trained_peer_mod	-0.7083046	0.1777734	-3.9843122	0.0000677	-0.3598752	-1.0567340	***
sd.Cost.Social_clinician_mod	-0.8822497	0.1810514	-4.8729229	0.0000011	-0.5273954	-1.2371040	***
sd.Cost.Social_peer_clinician_mod	-0.9841098	0.1799002	-5.4703098	0.0000000	-0.6315119	-1.3367077	***
sd.Cost.Endorsers_non_expert	-0.1360358	0.1159995	-1.1727281	0.2409049	0.0913189	-0.3633906	n.s.
sd.Cost.Endorsers_expert	-0.5192138	0.1233612	-4.2088898	0.0000257	-0.2774303	-0.7609974	***
sd.Cost.opt_out	0.0240736	0.0060531	3.9770768	0.0000698	0.0359374	0.0122097	***
sd.Outcomes_curr_sym.Outcomes_curr_sym	-0.1330185	0.1406935	-0.9454489	0.3444298	0.1427357	-0.4087726	n.s.
sd.Outcomes_curr_sym.Outcomes_curr_sym_future_sit	-0.2898217	0.1414023	-2.0496254	0.0404010	-0.0126783	-0.5669650	*
sd.Outcomes_curr_sym.Information_sharing_app_policy	0.9129944	0.1480067	6.1686021	0.0000000	1.2030822	0.6229066	***
sd.Outcomes_curr_sym.Information_sharing_user_settings	0.9396659	0.1244119	7.5528596	0.0000000	1.1835088	0.6958230	***
sd.Outcomes_curr_sym.Social_unmod_disc	-0.1828214	0.1595491	-1.1458626	0.2518520	0.1298892	-0.4955319	n.s.
sd.Outcomes_curr_sym.Social_trained_peer_mod	0.2667495	0.1574563	1.6941173	0.0902430	0.5753582	-0.0418592	.

sd.Outcomes_curr_sym.Social_clinician_mod	0.1729279	0.1587506	1.0893054	0.2760192	0.4840735	-0.1382176	n.s.
sd.Outcomes_curr_sym.Social_peer_clinician_mod	0.3558128	0.1442998	2.4657890	0.0136712	0.6386352	0.0729904	*
sd.Outcomes_curr_sym.Endorsers_non_expert	0.2817953	0.1247651	2.2586063	0.0239079	0.5263305	0.0372602	*
sd.Outcomes_curr_sym.Endorsers_expert	0.2415302	0.1171489	2.0617377	0.0392327	0.4711378	0.0119227	*
sd.Outcomes_curr_sym.opt_out	-0.0202625	0.0059134	-3.4265235	0.0006114	-0.0086724	-0.0318525	***
sd.Outcomes_curr_sym_future_sit.Outcomes_curr_sym_future_sit	0.5430948	0.1087420	4.9943408	0.0000006	0.7562253	0.3299643	***
sd.Outcomes_curr_sym_future_sit.Information_sharing_app_policy	0.8625391	0.1619669	5.3254040	0.0000001	1.1799883	0.5450898	***
sd.Outcomes_curr_sym_future_sit.Information_sharing_user_settings	0.5089861	0.1345002	3.7842789	0.0001542	0.7726015	0.2453706	***
sd.Outcomes_curr_sym_future_sit.Social_unmod_disc	0.9432997	0.1679284	5.6172726	0.0000000	1.2724333	0.6141660	***
sd.Outcomes_curr_sym_future_sit.Social_trained_peer_mod	0.7641097	0.1769165	4.3190401	0.0000157	1.1108597	0.4173596	***
sd.Outcomes_curr_sym_future_sit.Social_clinician_mod	0.6661952	0.1524793	4.3690857	0.0000125	0.9650492	0.3673413	***
sd.Outcomes_curr_sym_future_sit.Social_peer_clinician_mod	0.6538985	0.1584009	4.1281238	0.0000366	0.9643585	0.3434384	***
sd.Outcomes_curr_sym_future_sit.Endorsers_non_expert	-0.0281232	0.1181211	-0.2380875	0.8118132	0.2033900	-0.2596363	n.s.
sd.Outcomes_curr_sym_future_sit.Endorsers_expert	-0.1462936	0.1202284	-1.2167974	0.2236813	0.0893497	-0.3819370	n.s.
sd.Outcomes_curr_sym_future_sit.opt_out	-0.0167632	0.0049911	-3.3586570	0.0007832	-0.0069809	-0.0265455	***
sd.Information_sharing_app_policy.Information_sharing_app_policy	0.1520212	0.1611878	0.9431309	0.3456140	0.4679436	-0.1639011	n.s.
sd.Information_sharing_app_policy.Information_sharing_user_settings	0.5863955	0.1192869	4.9158423	0.0000009	0.8201935	0.3525975	***
sd.Information_sharing_app_policy.Social_unmod_disc	0.3745103	0.1833490	2.0426088	0.0410912	0.7338678	0.0151528	*
sd.Information_sharing_app_policy.Social_trained_peer_mod	0.6809220	0.1633679	4.1680275	0.0000307	1.0011173	0.3607268	***
sd.Information_sharing_app_policy.Social_clinician_mod	0.3589598	0.1605434	2.2359054	0.0253580	0.6736190	0.0443006	*
sd.Information_sharing_app_policy.Social_peer_clinician_mod	0.3614573	0.1485836	2.4326857	0.0149873	0.6526758	0.0702387	*
sd.Information_sharing_app_policy.Endorsers_non_expert	0.0366476	0.1126322	0.3253738	0.7448982	0.2574027	-0.1841076	n.s.
sd.Information_sharing_app_policy.Endorsers_expert	-0.4552267	0.1110829	-4.0980803	0.0000417	-0.2375082	-0.6729453	***
sd.Information_sharing_app_policy.opt_out	0.0047366	0.0051245	0.9243133	0.3553232	0.0147804	-0.0053072	n.s.
sd.Information_sharing_user_settings.Information_sharing_user_settings	-0.1688777	0.1007184	-1.6767318	0.0935949	0.0285267	-0.3662821	.
sd.Information_sharing_user_settings.Social_unmod_disc	0.0544420	0.1661813	0.3276059	0.7432096	0.3801513	-0.2712674	n.s.
sd.Information_sharing_user_settings.Social_trained_peer_mod	0.0376634	0.1500990	0.2509236	0.8018732	0.3318521	-0.2565253	n.s.
sd.Information_sharing_user_settings.Social_clinician_mod	-0.2047649	0.1524693	-1.3429908	0.1792750	0.0940695	-0.5035993	n.s.
sd.Information_sharing_user_settings.Social_peer_clinician_mod	-0.2318197	0.1696203	-1.3666976	0.1717201	0.1006300	-0.5642694	n.s.
sd.Information_sharing_user_settings.Endorsers_non_expert	-0.0026614	0.1163838	-0.0228674	0.9817560	0.2254467	-0.2307695	n.s.
sd.Information_sharing_user_settings.Endorsers_expert	0.0786829	0.1108800	0.7096217	0.4779387	0.2960037	-0.1386380	n.s.
sd.Information_sharing_user_settings.opt_out	0.0661143	0.0058921	11.2209258	0.0000000	0.0776625	0.0545661	***
sd.Social_unmod_disc.Social_unmod_disc	0.4443287	0.1839100	2.4160121	0.0156915	0.8047856	0.0838718	*
sd.Social_unmod_disc.Social_trained_peer_mod	0.1477059	0.1666371	0.8863930	0.3754058	0.4743086	-0.1788967	n.s.
sd.Social_unmod_disc.Social_clinician_mod	-0.0768937	0.1598295	-0.4810982	0.6304467	0.2363663	-0.3901536	n.s.
sd.Social_unmod_disc.Social_peer_clinician_mod	0.0983336	0.1615100	0.6088392	0.5426310	0.4148874	-0.2182202	n.s.

sd.Social_unmod_disc.Endorsers_non_expert	-0.1964750	0.1076699	-1.8247912	0.0680325	0.0145540	-0.4075040	.
sd.Social_unmod_disc.Endorsers_expert	-0.4531092	0.0991867	-4.5682464	0.0000049	-0.2587069	-0.6475115	***
sd.Social_unmod_disc.opt_out	-0.0369337	0.0044277	-8.3414470	0.0000000	-0.0282555	-0.0456120	***
sd.Social_trained_peer_mod.Social_trained_peer_mod	-0.0306632	0.1459988	-0.2100236	0.8336493	0.2554893	-0.3168157	n.s.
sd.Social_trained_peer_mod.Social_clinician_mod	-0.1971818	0.1501703	-1.3130549	0.1891645	0.0971465	-0.4915101	n.s.
sd.Social_trained_peer_mod.Social_peer_clinician_mod	-0.0800057	0.1620232	-0.4937920	0.6214531	0.2375539	-0.3975653	n.s.
sd.Social_trained_peer_mod.Endorsers_non_expert	-0.0555509	0.1171079	-0.4743566	0.6352456	0.1739764	-0.2850782	n.s.
sd.Social_trained_peer_mod.Endorsers_expert	0.1320267	0.1063534	1.2413966	0.2144593	0.3404755	-0.0764221	n.s.
sd.Social_trained_peer_mod.opt_out	-0.0062127	0.0034715	-1.7896400	0.0735118	0.0005913	-0.0130168	.
sd.Social_clinician_mod.Social_clinician_mod	0.3695152	0.1505727	2.4540652	0.0141251	0.6646322	0.0743981	*
sd.Social_clinician_mod.Social_peer_clinician_mod	0.1060433	0.1428262	0.7424643	0.4578060	0.3859775	-0.1738908	n.s.
sd.Social_clinician_mod.Endorsers_non_expert	0.0526290	0.1323889	0.3975332	0.6909743	0.3121066	-0.2068486	n.s.
sd.Social_clinician_mod.Endorsers_expert	-0.0430898	0.1170521	-0.3681252	0.7127799	0.1863280	-0.2725077	n.s.
sd.Social_clinician_mod.opt_out	0.0500265	0.0043669	11.4558675	0.0000000	0.0585855	0.0414676	***
sd.Social_peer_clinician_mod.Social_peer_clinician_mod	0.1042871	0.1465011	0.7118523	0.4765562	0.3914240	-0.1828497	n.s.
sd.Social_peer_clinician_mod.Endorsers_non_expert	-0.1264776	0.1213105	-1.0425941	0.2971363	0.1112866	-0.3642419	n.s.
sd.Social_peer_clinician_mod.Endorsers_expert	-0.2251867	0.1310450	-1.7183928	0.0857250	0.0316567	-0.4820301	.
sd.Social_peer_clinician_mod.opt_out	0.0402393	0.0047827	8.4135128	0.0000000	0.0496132	0.0308654	***
sd.Endorsers_non_expert.Endorsers_non_expert	0.3726137	0.1113311	3.3468968	0.0008172	0.5908187	0.1544088	***
sd.Endorsers_non_expert.Endorsers_expert	0.1492573	0.1103571	1.3524934	0.1762175	0.3655532	-0.0670387	n.s.
sd.Endorsers_non_expert.opt_out	-0.0226344	0.0038896	-5.8192324	0.0000000	-0.0150110	-0.0302579	***
sd.Endorsers_expert.Endorsers_expert	0.3410781	0.0927331	3.6780638	0.0002350	0.5228316	0.1593247	***
sd.Endorsers_expert.opt_out	0.0075600	0.0033632	2.2478693	0.0245845	0.0141518	0.0009683	*
sd.opt_out.opt_out	0.0298810	0.0039303	7.6027422	0.0000000	0.0375842	0.0221778	***

Note:

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Table 20: Performance of Mixed Logit Model (estimated with gmm1 package)

Statistic	Value
logLik	-2332.474
AIC	4844.947
BIC	5392.447
N	3240.000

Table 21: Mixed Logit Model (estimated with mlogit package)

Parameter	Estimate	Std. Error	z-value	Pr(> z)	sign
opt_out	-1.5756777	0.1678739	-9.3860776	0.0000000	***
Outcomes_curr_sym	-0.5544365	0.1105415	-5.0156402	0.0000005	***
Outcomes_curr_sym_future_sit	0.2382141	0.1103827	2.1580744	0.0309220	*
Information_sharing_app_policy	-0.5108733	0.1439967	-3.5478131	0.0003884	***
Information_sharing_user_settings	0.2409139	0.0965563	2.4950619	0.0125935	*
Social_unmod_disc	-0.5224484	0.1508755	-3.4627777	0.0005346	***
Social_trained_peer_mod	0.2672896	0.1466907	1.8221307	0.0684352	.
Social_clinician_mod	0.2614463	0.1379792	1.8948234	0.0581158	.
Social_peer_clinician_mod	0.5244693	0.1445127	3.6292268	0.0002843	***
Endorsers_non_expert	0.3657552	0.0993173	3.6826953	0.0002308	***
Endorsers_expert	1.1252830	0.1033995	10.8828697	0.0000000	***
Cost	-0.0880566	0.0048271	-18.2420002	0.0000000	***
chol.opt_out:opt_out	3.4012096	0.2483171	13.6970411	0.0000000	***
chol.opt_out:Outcomes_curr_sym	0.5777283	0.1371202	4.2132998	0.0000252	***
chol.Outcomes_curr_sym:Outcomes_curr_sym	0.3713084	0.1140468	3.2557547	0.0011309	**
chol.opt_out:Outcomes_curr_sym_future_sit	0.9093171	0.1373354	6.6211427	0.0000000	***
chol.Outcomes_curr_sym:Outcomes_curr_sym_future_sit	0.5751640	0.1185927	4.8499108	0.0000012	***
chol.Outcomes_curr_sym_future_sit:Outcomes_curr_sym_future_sit	-0.3558091	0.0866453	-4.1065008	0.0000402	***
chol.opt_out:Information_sharing_app_policy	1.4888309	0.1768027	8.4208597	0.0000000	***
chol.Outcomes_curr_sym:Information_sharing_app_policy	1.0716730	0.1300287	8.2418178	0.0000000	***
chol.Outcomes_curr_sym_future_sit:Information_sharing_app_policy	0.1450492	0.1197084	1.2116882	0.2256318	n.s.
chol.Information_sharing_app_policy:Information_sharing_app_policy	0.1676845	0.1246067	1.3457104	0.1783959	n.s.
chol.opt_out:Information_sharing_user_settings	0.9436252	0.1215907	7.7606670	0.0000000	***
chol.Outcomes_curr_sym:Information_sharing_user_settings	0.8412785	0.1090046	7.7178259	0.0000000	***
chol.Outcomes_curr_sym_future_sit:Information_sharing_user_settings	-0.1287415	0.0927921	-1.3874183	0.1653143	n.s.
chol.Information_sharing_app_policy:Information_sharing_user_settings	-0.2631120	0.0986291	-2.6676906	0.0076375	**
chol.Information_sharing_user_settings:Information_sharing_user_settings	-0.1010873	0.0811401	-1.2458369	0.2128243	n.s.
chol.opt_out:Social_unmod_disc	0.0712647	0.1781279	0.4000762	0.6891004	n.s.
chol.Outcomes_curr_sym:Social_unmod_disc	0.1595057	0.1479387	1.0781876	0.2809500	n.s.
chol.Outcomes_curr_sym_future_sit:Social_unmod_disc	-0.1341690	0.1301498	-1.0308814	0.3025964	n.s.
chol.Information_sharing_app_policy:Social_unmod_disc	0.2629302	0.1428408	1.8407218	0.0656623	.
chol.Information_sharing_user_settings:Social_unmod_disc	0.3732980	0.1461212	2.5547157	0.0106275	*
chol.Social_unmod_disc:Social_unmod_disc	0.9465333	0.1462459	6.4722035	0.0000000	***

chol.opt_out:Social_trained_peer_mod	0.6086089	0.1797021	3.3867655	0.0007072	***
chol.Outcomes_curr_sym:Social_trained_peer_mod	0.4135497	0.1576083	2.6239075	0.0086927	**
chol.Outcomes_curr_sym_future_sit:Social_trained_peer_mod	-0.0295728	0.1363590	-0.2168746	0.8283061	n.s.
chol.Information_sharing_app_policy:Social_trained_peer_mod	0.1614719	0.1490320	1.0834709	0.2785994	n.s.
chol.Information_sharing_user_settings:Social_trained_peer_mod	-0.3156249	0.1398211	-2.2573485	0.0239863	*
chol.Social_unmod_disc:Social_trained_peer_mod	0.4885587	0.1545218	3.1617458	0.0015683	**
chol.Social_trained_peer_mod:Social_trained_peer_mod	-0.0801123	0.1530501	-0.5234385	0.6006692	n.s.
chol.opt_out:Social_clinician_mod	0.7854150	0.1707924	4.5986530	0.0000043	***
chol.Outcomes_curr_sym:Social_clinician_mod	0.5816733	0.1442540	4.0322849	0.0000552	***
chol.Outcomes_curr_sym_future_sit:Social_clinician_mod	-0.0627158	0.1243526	-0.5043389	0.6140233	n.s.
chol.Information_sharing_app_policy:Social_clinician_mod	-0.0671814	0.1437773	-0.4672602	0.6403137	n.s.
chol.Information_sharing_user_settings:Social_clinician_mod	-0.2970273	0.1314922	-2.2588963	0.0238898	*
chol.Social_unmod_disc:Social_clinician_mod	0.4644032	0.1458670	3.1837448	0.0014538	**
chol.Social_trained_peer_mod:Social_clinician_mod	-0.0456804	0.1602791	-0.2850054	0.7756400	n.s.
chol.Social_clinician_mod:Social_clinician_mod	-0.4771270	0.1301667	-3.6655085	0.0002468	***
chol.opt_out:Social_peer_clinician_mod	0.9956440	0.1879610	5.2970771	0.0000001	***
chol.Outcomes_curr_sym:Social_peer_clinician_mod	0.3894142	0.1408308	2.7651214	0.0056902	**
chol.Outcomes_curr_sym_future_sit:Social_peer_clinician_mod	-0.3630421	0.1270157	-2.8582467	0.0042599	**
chol.Information_sharing_app_policy:Social_peer_clinician_mod	0.1355083	0.1313404	1.0317330	0.3021972	n.s.
chol.Information_sharing_user_settings:Social_peer_clinician_mod	-0.2815373	0.1360487	-2.0693870	0.0385098	*
chol.Social_unmod_disc:Social_peer_clinician_mod	0.7370331	0.1480853	4.9770843	0.0000006	***
chol.Social_trained_peer_mod:Social_peer_clinician_mod	0.0485349	0.1494353	0.3247888	0.7453409	n.s.
chol.Social_clinician_mod:Social_peer_clinician_mod	-0.3095095	0.1296654	-2.3869859	0.0169871	*
chol.Social_peer_clinician_mod:Social_peer_clinician_mod	-0.1520148	0.1229797	-1.2360968	0.2164226	n.s.
chol.opt_out:Endorsers_non_expert	0.6667812	0.1238059	5.3856980	0.0000001	***
chol.Outcomes_curr_sym:Endorsers_non_expert	-0.1130662	0.1154414	-0.9794246	0.3273702	n.s.
chol.Outcomes_curr_sym_future_sit:Endorsers_non_expert	0.2202502	0.0976137	2.2563440	0.0240491	*
chol.Information_sharing_app_policy:Endorsers_non_expert	-0.1366789	0.1095541	-1.2475936	0.2121799	n.s.
chol.Information_sharing_user_settings:Endorsers_non_expert	-0.0978154	0.1057366	-0.9250851	0.3549216	n.s.
chol.Social_unmod_disc:Endorsers_non_expert	-0.0766359	0.1129973	-0.6782099	0.4976386	n.s.
chol.Social_trained_peer_mod:Endorsers_non_expert	-0.3750318	0.1289347	-2.9086949	0.0036294	**
chol.Social_clinician_mod:Endorsers_non_expert	0.0128610	0.1072223	0.1199467	0.9045253	n.s.
chol.Social_peer_clinician_mod:Endorsers_non_expert	0.4068283	0.1086115	3.7457184	0.0001799	***
chol.Endorsers_non_expert:Endorsers_non_expert	-0.0524029	0.1154221	-0.4540106	0.6498212	n.s.
chol.opt_out:Endorsers_expert	1.1312720	0.1218455	9.2844780	0.0000000	***
chol.Outcomes_curr_sym:Endorsers_expert	-0.1429842	0.1101688	-1.2978648	0.1943338	n.s.

chol.Outcomes_curr_sym_future_sit:Endorsers_expert	0.0883835	0.0981357	0.9006247	0.3677879	n.s.
chol.Information_sharing_app_policy:Endorsers_expert	-0.1697791	0.1013211	-1.6756546	0.0938059	.
chol.Information_sharing_user_settings:Endorsers_expert	0.0305430	0.1018113	0.2999958	0.7641804	n.s.
chol.Social_unmod_disc:Endorsers_expert	-0.0240178	0.1097330	-0.2188749	0.8267475	n.s.
chol.Social_trained_peer_mod:Endorsers_expert	-0.4599858	0.1213025	-3.7920565	0.0001494	***
chol.Social_clinician_mod:Endorsers_expert	0.4071009	0.1078758	3.7737937	0.0001608	***
chol.Social_peer_clinician_mod:Endorsers_expert	-0.0643161	0.1047656	-0.6139051	0.5392781	n.s.
chol.Endorsers_non_expert:Endorsers_expert	0.4027657	0.1122232	3.5889714	0.0003320	***
chol.Endorsers_expert:Endorsers_expert	-0.3920355	0.1016679	-3.8560401	0.0001152	***
chol.opt_out:Cost	0.0058776	0.0045131	1.3023475	0.1927976	n.s.
chol.Outcomes_curr_sym:Cost	0.0259778	0.0049016	5.2998546	0.0000001	***
chol.Outcomes_curr_sym_future_sit:Cost	0.0500121	0.0041385	12.0846385	0.0000000	***
chol.Information_sharing_app_policy:Cost	0.0174666	0.0035799	4.8790545	0.0000011	***
chol.Information_sharing_user_settings:Cost	0.0209186	0.0032134	6.5098032	0.0000000	***
chol.Social_unmod_disc:Cost	0.0033345	0.0032470	1.0269344	0.3044514	n.s.
chol.Social_trained_peer_mod:Cost	0.0678502	0.0051170	13.2598025	0.0000000	***
chol.Social_clinician_mod:Cost	0.0254424	0.0033269	7.6475746	0.0000000	***
chol.Social_peer_clinician_mod:Cost	0.0315946	0.0033486	9.4351846	0.0000000	***
chol.Endorsers_non_expert:Cost	0.0339137	0.0034237	9.9054553	0.0000000	***
chol.Endorsers_expert:Cost	0.0351164	0.0036589	9.5976560	0.0000000	***
chol.Cost:Cost	0.0590729	0.0042614	13.8624578	0.0000000	***

Note:

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Table 22: Performance of Mixed Logit Model (estimated with mlogit package)

Statistic	Value
logLik	-2321.389
AIC	4822.779
N	3240.000

Table 23: Generalised Multinomial Logit Model (estimated with gmn1 package)

Parameter	est	se	stat	p	lwr	upr	sign
opt_out	-1.7915273	0.2286301	-7.8359213	0.0000000	-1.3434206	-2.2396340	***
Outcomes_curr_sym	-0.4506410	0.1211093	-3.7209456	0.0001985	-0.2132712	-0.6880108	***
Outcomes_curr_sym_future_sit	0.3252491	0.1262654	2.5759164	0.0099975	0.5727246	0.0777735	**
Information_sharing_app_policy	-0.3696215	0.1641501	-2.2517289	0.0243394	-0.0478932	-0.6913497	*
Information_sharing_user_settings	0.3154184	0.1119787	2.8167702	0.0048509	0.5348927	0.0959441	**
Social_unmod_disc	-0.1999997	0.1694887	-1.1800177	0.2379932	0.1321921	-0.5321915	n.s.
Social_trained_peer_mod	0.4203326	0.1571961	2.6739388	0.0074966	0.7284313	0.1122340	**
Social_clinician_mod	0.6118714	0.1617261	3.7833819	0.0001547	0.9288487	0.2948942	***
Social_peer_clinician_mod	0.6776965	0.1582924	4.2812943	0.0000186	0.9879440	0.3674490	***
Endorsers_non_expert	0.4007123	0.1073564	3.7325433	0.0001896	0.6111269	0.1902977	***
Endorsers_expert	1.1127874	0.1225135	9.0829807	0.0000000	1.3529094	0.8726654	***
Cost	-0.1191273	0.0079095	-15.0612722	0.0000000	-0.1036249	-0.1346296	***
sd.Cost.Cost	-2.7722942	0.2459150	-11.2733843	0.0000000	-2.2903097	-3.2542787	***
sd.Cost.Outcomes_curr_sym	-0.3745404	0.1441131	-2.5989343	0.0093514	-0.0920840	-0.6569968	**
sd.Cost.Outcomes_curr_sym_future_sit	-0.6185208	0.1426963	-4.3345249	0.0000146	-0.3388412	-0.8982005	***
sd.Cost.Information_sharing_app_policy	-0.8810655	0.1766005	-4.9890315	0.0000006	-0.5349349	-1.2271962	***
sd.Cost.Information_sharing_user_settings	-0.7667911	0.1230943	-6.2292976	0.0000000	-0.5255307	-1.0080515	***
sd.Cost.Social_unmod_disc	0.1687106	0.1824935	0.9244745	0.3552393	0.5263912	-0.1889701	n.s.
sd.Cost.Social_trained_peer_mod	-0.0876463	0.1685876	-0.5198856	0.6031433	0.2427793	-0.4180719	n.s.
sd.Cost.Social_clinician_mod	-0.4214853	0.1819063	-2.3170464	0.0205012	-0.0649555	-0.7780150	*
sd.Cost.Social_peer_clinician_mod	-0.6875501	0.1747724	-3.9339750	0.0000836	-0.3450026	-1.0300977	***
sd.Cost.Endorsers_non_expert	-0.4299505	0.1215003	-3.5386775	0.0004021	-0.1918142	-0.6680868	***
sd.Cost.Endorsers_expert	-0.6436560	0.1237930	-5.1994530	0.0000002	-0.4010261	-0.8862859	***
sd.Cost.opt_out	0.0094708	0.0053510	1.7699322	0.0767384	0.0199585	-0.0010169	.
sd.Outcomes_curr_sym.Outcomes_curr_sym	0.6768326	0.1327435	5.0987988	0.0000003	0.9370052	0.4166601	***
sd.Outcomes_curr_sym.Outcomes_curr_sym_future_sit	0.2411803	0.1481112	1.6283731	0.1034458	0.5314729	-0.0491123	n.s.
sd.Outcomes_curr_sym.Information_sharing_app_policy	-0.2725389	0.1462426	-1.8636080	0.0623768	0.0140913	-0.5591692	.
sd.Outcomes_curr_sym.Information_sharing_user_settings	-0.3136321	0.1276412	-2.4571378	0.0140049	-0.0634599	-0.5638042	*
sd.Outcomes_curr_sym.Social_unmod_disc	-0.2021974	0.1747383	-1.1571441	0.2472135	0.1402834	-0.5446783	n.s.
sd.Outcomes_curr_sym.Social_trained_peer_mod	0.2031801	0.1632623	1.2445009	0.2133153	0.5231683	-0.1168082	n.s.
sd.Outcomes_curr_sym.Social_clinician_mod	0.2710951	0.1908429	1.4205143	0.1554580	0.6451404	-0.1029502	n.s.
sd.Outcomes_curr_sym.Social_peer_clinician_mod	-0.0187218	0.1462129	-0.1280450	0.8981133	0.2678501	-0.3052938	n.s.

sd.Outcomes_curr_sym.Endorsers_non_expert	0.1686829	0.1283602	1.3141365	0.1888003	0.4202643	-0.0828986	n.s.
sd.Outcomes_curr_sym.Endorsers_expert	-0.4882545	0.1189175	-4.1058240	0.0000403	-0.2551804	-0.7213286	***
sd.Outcomes_curr_sym.opt_out	-0.0316698	0.0049988	-6.3355171	0.0000000	-0.0218724	-0.0414672	***
sd.Outcomes_curr_sym_future_sit.Outcomes_curr_sym_future_sit	0.6217900	0.1286835	4.8319333	0.0000014	0.8740049	0.3695750	***
sd.Outcomes_curr_sym_future_sit.Information_sharing_app_policy	0.8635198	0.1689122	5.1122413	0.0000003	1.1945815	0.5324580	***
sd.Outcomes_curr_sym_future_sit.Information_sharing_user_settings	0.2452118	0.1224301	2.0028713	0.0451911	0.4851705	0.0052532	*
sd.Outcomes_curr_sym_future_sit.Social_unmod_disc	0.2123042	0.1892253	1.1219651	0.2618773	0.5831789	-0.1585706	n.s.
sd.Outcomes_curr_sym_future_sit.Social_trained_peer_mod	0.4028673	0.2129430	1.8919022	0.0585040	0.8202278	-0.0144933	.
sd.Outcomes_curr_sym_future_sit.Social_clinician_mod	0.4446167	0.1758004	2.5290987	0.0114356	0.7891792	0.1000541	*
sd.Outcomes_curr_sym_future_sit.Social_peer_clinician_mod	0.0520972	0.1947494	0.2675090	0.7890773	0.4337991	-0.3296047	n.s.
sd.Outcomes_curr_sym_future_sit.Endorsers_non_expert	-0.1821372	0.1298020	-1.4031921	0.1605596	0.0722701	-0.4365445	n.s.
sd.Outcomes_curr_sym_future_sit.Endorsers_expert	-0.0422885	0.1508277	-0.2803761	0.7791890	0.2533283	-0.3379053	n.s.
sd.Outcomes_curr_sym_future_sit.opt_out	-0.0402664	0.0066549	-6.0506329	0.0000000	-0.0272230	-0.0533098	***
sd.Information_sharing_app_policy.Information_sharing_app_policy	0.9232627	0.1305349	7.0729171	0.0000000	1.1791065	0.6674190	***
sd.Information_sharing_app_policy.Information_sharing_user_settings	0.9345778	0.1144756	8.1639936	0.0000000	1.1589458	0.7102098	***
sd.Information_sharing_app_policy.Social_unmod_disc	-0.2676114	0.1516218	-1.7649927	0.0775650	0.0295619	-0.5647848	.
sd.Information_sharing_app_policy.Social_trained_peer_mod	0.2552355	0.1656606	1.5407137	0.1233865	0.5799242	-0.0694532	n.s.
sd.Information_sharing_app_policy.Social_clinician_mod	0.5830872	0.1586223	3.6759467	0.0002370	0.8939813	0.2721932	***
sd.Information_sharing_app_policy.Social_peer_clinician_mod	0.3710806	0.1516976	2.4461866	0.0144376	0.6684024	0.0737588	*
sd.Information_sharing_app_policy.Endorsers_non_expert	-0.2244844	0.1106424	-2.0289173	0.0424667	-0.0076292	-0.4413396	*
sd.Information_sharing_app_policy.Endorsers_expert	-0.1097536	0.1143394	-0.9598933	0.3371089	0.1143475	-0.3338548	n.s.
sd.Information_sharing_app_policy.opt_out	0.0058343	0.0039068	1.4933396	0.1353483	0.0134915	-0.0018230	n.s.
sd.Information_sharing_user_settings.Information_sharing_user_settings	0.4223575	0.0911793	4.6321651	0.0000036	0.6010657	0.2436494	***
sd.Information_sharing_user_settings.Social_unmod_disc	0.7827613	0.1659445	4.7170067	0.0000024	1.1080065	0.4575160	***
sd.Information_sharing_user_settings.Social_trained_peer_mod	0.3027365	0.1763254	1.7169193	0.0859939	0.6483280	-0.0428550	.
sd.Information_sharing_user_settings.Social_clinician_mod	0.3230217	0.1747482	1.8484984	0.0645303	0.6655219	-0.0194784	.
sd.Information_sharing_user_settings.Social_peer_clinician_mod	0.4808014	0.1480065	3.2485144	0.0011601	0.7708889	0.1907139	**
sd.Information_sharing_user_settings.Endorsers_non_expert	0.1114038	0.1031504	1.0800137	0.2801361	0.3135749	-0.0907672	n.s.
sd.Information_sharing_user_settings.Endorsers_expert	-0.0910143	0.1176055	-0.7738953	0.4389927	0.1394881	-0.3215168	n.s.
sd.Information_sharing_user_settings.opt_out	0.0427127	0.0059696	7.1549996	0.0000000	0.0544129	0.0310124	***
sd.Social_unmod_disc.Social_unmod_disc	-0.3309014	0.1805068	-1.8331804	0.0667758	0.0228853	-0.6846882	.
sd.Social_unmod_disc.Social_trained_peer_mod	-0.0830227	0.1472676	-0.5637541	0.5729215	0.2056165	-0.3716619	n.s.
sd.Social_unmod_disc.Social_clinician_mod	-0.4245654	0.1800528	-2.3580042	0.0183735	-0.0716683	-0.7774625	*
sd.Social_unmod_disc.Social_peer_clinician_mod	-0.3328157	0.1433905	-2.3210451	0.0202844	-0.0517756	-0.6138559	*
sd.Social_unmod_disc.Endorsers_non_expert	-0.1028295	0.1100949	-0.9340074	0.3503001	0.1129526	-0.3186116	n.s.
sd.Social_unmod_disc.Endorsers_expert	0.1669512	0.1154014	1.4466995	0.1479811	0.3931338	-0.0592315	n.s.

sd.Social_unmod_disc.opt_out	0.0836088	0.0070848	11.8011184	0.0000000	0.0974948	0.0697228	***
sd.Social_trained_peer_mod.Social_trained_peer_mod	-0.3400737	0.1561987	-2.1771872	0.0294666	-0.0339300	-0.6462175	*
sd.Social_trained_peer_mod.Social_clinician_mod	-0.3712476	0.2054655	-1.8068605	0.0707840	0.0314575	-0.7739526	.
sd.Social_trained_peer_mod.Social_peer_clinician_mod	-0.2804843	0.1707267	-1.6428844	0.1004069	0.0541340	-0.6151025	n.s.
sd.Social_trained_peer_mod.Endorsers_non_expert	-0.1985882	0.1341482	-1.4803645	0.1387760	0.0643374	-0.4615139	n.s.
sd.Social_trained_peer_mod.Endorsers_expert	-0.2647114	0.1138522	-2.3250453	0.0200695	-0.0415653	-0.4878575	*
sd.Social_trained_peer_mod.opt_out	-0.0262562	0.0050063	-5.2446555	0.0000002	-0.0164440	-0.0360683	***
sd.Social_clinician_mod.Social_clinician_mod	-0.2541064	0.2736805	-0.9284782	0.3531596	0.2822976	-0.7905104	n.s.
sd.Social_clinician_mod.Social_peer_clinician_mod	-0.4509066	0.1879500	-2.3990772	0.0164364	-0.0825313	-0.8192819	*
sd.Social_clinician_mod.Endorsers_non_expert	-0.1585216	0.1300935	-1.2185211	0.2230260	0.0964569	-0.4135001	n.s.
sd.Social_clinician_mod.Endorsers_expert	-0.5742630	0.1516512	-3.7867345	0.0001526	-0.2770320	-0.8714940	***
sd.Social_clinician_mod.opt_out	0.0204545	0.0049604	4.1235409	0.0000373	0.0301767	0.0107322	***
sd.Social_peer_clinician_mod.Social_peer_clinician_mod	-0.2016323	0.1269137	-1.5887349	0.1121203	0.0471141	-0.4503786	n.s.
sd.Social_peer_clinician_mod.Endorsers_non_expert	-0.2925677	0.1061404	-2.7564218	0.0058438	-0.0845363	-0.5005991	**
sd.Social_peer_clinician_mod.Endorsers_expert	0.2325768	0.1115599	2.0847715	0.0370900	0.4512302	0.0139235	*
sd.Social_peer_clinician_mod.opt_out	-0.0231181	0.0042543	-5.4340543	0.0000001	-0.0147798	-0.0314564	***
sd.Endorsers_non_expert.Endorsers_non_expert	0.1757512	0.1072417	1.6388328	0.1012481	0.3859411	-0.0344387	n.s.
sd.Endorsers_non_expert.Endorsers_expert	0.5355485	0.1512988	3.5396750	0.0004006	0.8320887	0.2390084	***
sd.Endorsers_non_expert.opt_out	-0.0060621	0.0035641	-1.7008994	0.0889619	0.0009233	-0.0130475	.
sd.Endorsers_expert.Endorsers_expert	0.0530512	0.0999171	0.5309520	0.5954521	0.2488852	-0.1427828	n.s.
sd.Endorsers_expert.opt_out	0.0079668	0.0038257	2.0824280	0.0373034	0.0154650	0.0004685	*
sd.opt_out.opt_out	0.0232328	0.0037355	6.2193941	0.0000000	0.0305544	0.0159113	***
tau	-0.3582830	0.0787092	-4.5519862	0.0000053	-0.2040159	-0.5125502	***
gamma	0.0380445	0.1108679	0.3431517	0.7314844	0.2553416	-0.1792526	n.s.

Note:

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Table 24: Performance of Generalised Multinomial Logit Model
(estimated with gmnL package)

Statistic	Value
logLik	-2304.505
AIC	4793.010
BIC	5352.676

N	3240.000
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3.3 Models of the the relationship between young people’s characteristics and their preferences for social anxiety apps

Table 25: Signficiant pareticipant characteristic predictors of each attribute from attribute specific mixed models (all estimated with gmm1 package)

Attribute	jurisdiction	pilot participant	time taken	area disadvantage	gender	urbanicity	SIAS
Outcomes	VIC	rc_pilot_participant	NA	NA	NA	NA	NA
Information_sharing	ACT SA	NA	der_under_ten_mins	Q1	der_gender_opnts	der_urban	NA
Social	ACT QLD TAS	rc_pilot_participant	NA	NA	NA	NA	der_SIAS_sa
Endorsers	VIC	NA	der_under_ten_mins	NA	NA	NA	NA
Cost	SA VIC WA	rc_pilot_participant	der_under_ten_mins	Q2 Q4	der_gender_opnts	der_urban	NA
opt_out	QLD SA VIC	NA	NA	NA	NA	NA	NA

3.4 Models of social anxiety app preference based sub-groups of young people

Table 26: Basic latent class model (estimated with gmm package)

Parameter	est	se	stat	p	lwr	upr	sign
class.1.opt_out	-1.4175249	0.1967431	-7.2049531	0.0000000	-1.0319155	-1.8031343	***
class.1.Outcomes_curr_sym	-0.6983289	0.1433624	-4.8710748	0.0000011	-0.4173438	-0.9793140	***
class.1.Outcomes_curr_sym_future_sit	-0.0454364	0.1448276	-0.3137277	0.7537278	0.2384205	-0.3292933	n.s.
class.1.Information_sharing_app_policy	-0.7924275	0.1953997	-4.0554177	0.0000500	-0.4094511	-1.1754039	***
class.1.Information_sharing_user_settings	0.1561315	0.1122817	1.3905329	0.1643671	0.3761996	-0.0639367	n.s.
class.1.Social_unmod_disc	-0.8993515	0.1937359	-4.6421514	0.0000034	-0.5196361	-1.2790670	***
class.1.Social_trained_peer_mod	0.0258336	0.1637250	0.1577863	0.8746252	0.3467288	-0.2950616	n.s.
class.1.Social_clinician_mod	0.0914243	0.1576017	0.5800974	0.5618490	0.4003179	-0.2174693	n.s.
class.1.Social_peer_clinician_mod	0.2975502	0.1576989	1.8868251	0.0591839	0.6066343	-0.0115339	.
class.1.Endorsers_non_expert	0.1648716	0.1215662	1.3562292	0.1750263	0.4031370	-0.0733937	n.s.
class.1.Endorsers_expert	0.7845821	0.1288220	6.0904354	0.0000000	1.0370686	0.5320956	***
class.1.Cost	-0.1021284	0.0083872	-12.1766657	0.0000000	-0.0856897	-0.1185670	***
class.2.opt_out	-1.0828934	0.1673850	-6.4694782	0.0000000	-0.7548249	-1.4109619	***
class.2.Outcomes_curr_sym	-0.2046310	0.1062131	-1.9266086	0.0540284	0.0035428	-0.4128048	.
class.2.Outcomes_curr_sym_future_sit	0.2681121	0.1138860	2.3542138	0.0185619	0.4913246	0.0448995	*
class.2.Information_sharing_app_policy	0.1101895	0.1339695	0.8224968	0.4107942	0.3727649	-0.1523859	n.s.
class.2.Information_sharing_user_settings	0.3261825	0.0960713	3.3952135	0.0006858	0.5144788	0.1378863	***
class.2.Social_unmod_disc	0.0043738	0.1347984	0.0324473	0.9741154	0.2685739	-0.2598262	n.s.
class.2.Social_trained_peer_mod	0.4906033	0.1496951	3.2773501	0.0010479	0.7840003	0.1972062	**
class.2.Social_clinician_mod	0.4579945	0.1415026	3.2366516	0.0012094	0.7353344	0.1806546	**
class.2.Social_peer_clinician_mod	0.5740241	0.1419798	4.0429990	0.0000528	0.8522993	0.2957488	***
class.2.Endorsers_non_expert	0.2220282	0.0896907	2.4754885	0.0133054	0.3978187	0.0462377	*
class.2.Endorsers_expert	0.7370706	0.0902553	8.1665051	0.0000000	0.9139678	0.5601734	***
class.2.Cost	-0.0224690	0.0042714	-5.2602841	0.0000001	-0.0140971	-0.0308408	***
(class)2	-0.1979142	0.0408474	-4.8452098	0.0000013	-0.1178548	-0.2779736	***

Note:

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Table 27: Basic latent class model (estimated with gmm package)

Statistic	Value
logLik	-2588.788
AIC	5227.575
BIC	5379.658
N	3240.000

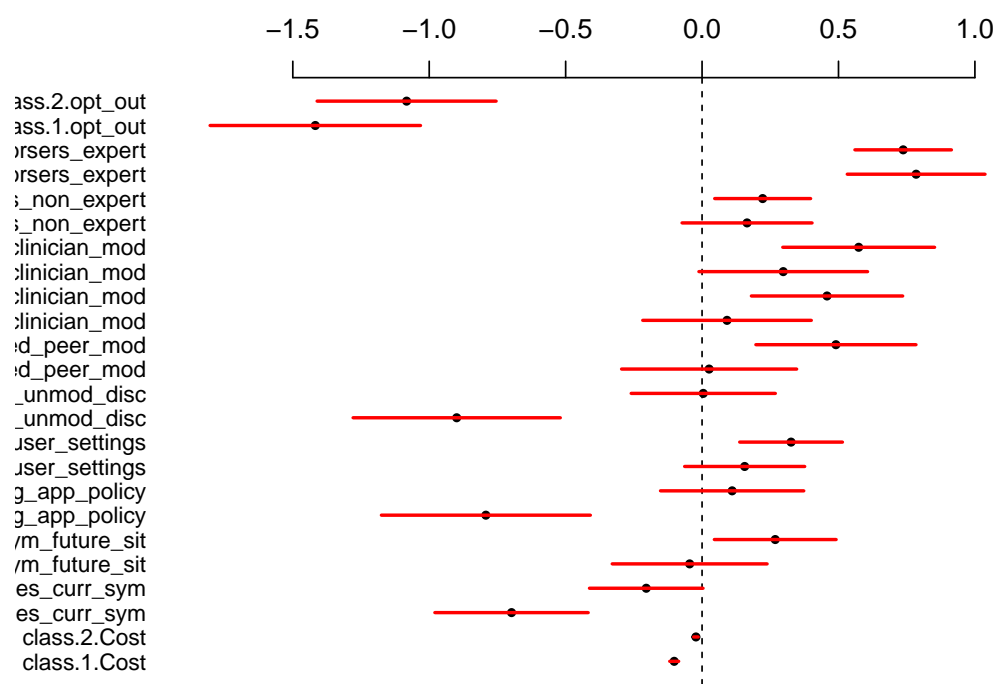


Figure 7: Coefficient variation by class in basic latent class model

Table 28: Mixed latent class model (estimated with gmm1 package)

Parameter	est	se	stat	p	lwr	upr	sign
class.1.opt_out	-1.4674073	0.2025697	-7.2439613	0.0000000	-1.0703779	-1.8644366	***
class.1.Outcomes_curr_sym	-0.7134793	0.1463596	-4.8748381	0.0000011	-0.4266198	-1.0003388	***
class.1.Outcomes_curr_sym_future_sit	-0.0370828	0.1451875	-0.2554128	0.7984043	0.2474796	-0.3216451	n.s.
class.1.Information_sharing_app_policy	-0.8126520	0.2016632	-4.0297490	0.0000558	-0.4173994	-1.2079046	***
class.1.Information_sharing_user_settings	0.1640446	0.1145805	1.4316982	0.1522302	0.3886182	-0.0605289	n.s.
class.1.Social_unmod_disc	-0.9332417	0.1976830	-4.7208995	0.0000023	-0.5457901	-1.3206934	***
class.1.Social_trained_peer_mod	0.0405209	0.1658145	0.2443747	0.8069407	0.3655113	-0.2844696	n.s.
class.1.Social_clinician_mod	0.0906473	0.1628891	0.5564972	0.5778710	0.4099041	-0.2286095	n.s.
class.1.Social_peer_clinician_mod	0.3062542	0.1613108	1.8985353	0.0576256	0.6224175	-0.0099091	.
class.1.Endorsers_non_expert	0.1763680	0.1231276	1.4324005	0.1520292	0.4176936	-0.0649576	n.s.
class.1.Endorsers_expert	0.7968390	0.1297651	6.1406269	0.0000000	1.0511739	0.5425041	***
class.1.Cost	-0.1028362	0.0097238	-10.5757127	0.0000000	-0.0837779	-0.1218945	***
class.2.opt_out	-1.0723476	0.1655654	-6.4768822	0.0000000	-0.7478453	-1.3968498	***
class.2.Outcomes_curr_sym	-0.2000045	0.1054997	-1.8957830	0.0579887	0.0067711	-0.4067801	.
class.2.Outcomes_curr_sym_future_sit	0.2720039	0.1128697	2.4098929	0.0159572	0.4932244	0.0507833	*
class.2.Information_sharing_app_policy	0.1173688	0.1340561	0.8755201	0.3812910	0.3801138	-0.1453763	n.s.
class.2.Information_sharing_user_settings	0.3253134	0.0965778	3.3684081	0.0007560	0.5146024	0.1360244	***
class.2.Social_unmod_disc	0.0051815	0.1349981	0.0383823	0.9693829	0.2697730	-0.2594100	n.s.
class.2.Social_trained_peer_mod	0.4903084	0.1487029	3.2972350	0.0009764	0.7817608	0.1988561	***
class.2.Social_clinician_mod	0.4646432	0.1402173	3.3137369	0.0009206	0.7394640	0.1898224	***
class.2.Social_peer_clinician_mod	0.5762682	0.1408945	4.0900699	0.0000431	0.8524163	0.3001201	***
class.2.Endorsers_non_expert	0.2186670	0.0894927	2.4434049	0.0145494	0.3940695	0.0432644	*
class.2.Endorsers_expert	0.7379999	0.0896627	8.2308418	0.0000000	0.9137356	0.5622641	***
class.2.Cost	-0.0226088	0.0043185	-5.2353170	0.0000002	-0.0141447	-0.0310729	***
(class)2	-0.2176248	0.2076117	-1.0482297	0.2945328	0.1892867	-0.6245363	n.s.
der_age_u20:class2	0.4184097	0.0836309	5.0030498	0.0000006	0.5823233	0.2544961	***
class2:der_gender_male	0.3389004	0.0844640	4.0123636	0.0000601	0.5044468	0.1733539	***
class2:der_gender_opnts	-0.5506199	0.2060684	-2.6720256	0.0075395	-0.1467334	-0.9545065	**
class2:der_SIAS_nr	-0.4930891	0.1550610	-3.1799676	0.0014729	-0.1891750	-0.7970032	**
class2:der_SIAS_sa	-0.2821464	0.1158953	-2.4344945	0.0149126	-0.0549958	-0.5092970	*
class2:der_urban	-0.4157006	0.1152845	-3.6058686	0.0003111	-0.1897472	-0.6416540	***
class2:der_STE_VIC	0.5084802	0.1021073	4.9798591	0.0000006	0.7086069	0.3083535	***
class2:der_STE_QLD	0.9610344	0.1564815	6.1415193	0.0000000	1.2677326	0.6543362	***

class2:der_STE_SA	-0.3911096	0.1622921	-2.4099122	0.0159564	-0.0730230	-0.7091963	*
class2:der_STE_WA	0.6446911	0.1537307	4.1936403	0.0000275	0.9459977	0.3433846	***
class2:der_STE_ACT	-0.8825642	0.3077191	-2.8680841	0.0041297	-0.2794459	-1.4856824	**
class2:der_STE_TAS	-1.3716448	0.4488900	-3.0556368	0.0022458	-0.4918366	-2.2514531	**
class2:der_SEIFA_Q1	0.4702736	0.1465565	3.2088215	0.0013328	0.7575190	0.1830282	**
class2:der_SEIFA_Q2	-0.3567983	0.1220462	-2.9234685	0.0034616	-0.1175921	-0.5960046	**
class2:der_SEIFA_Q4	-0.2902282	0.1070185	-2.7119439	0.0066890	-0.0804758	-0.4999807	**
class2:rc_pilot_participant	0.5208162	0.1230549	4.2323874	0.0000231	0.7619995	0.2796329	***
class2:der_under_ten_mins	0.3297175	0.0928839	3.5497822	0.0003855	0.5117666	0.1476685	***

Note:

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Table 29: Mixed latent class model (estimated with gmn1 package)

Statistic	Value
logLik	-2555.043
AIC	5194.087
BIC	5449.392
N	3225.000

Table 30: Mixed mixed with correlated random parameters (estimated with gmn1 package)

Parameter	est	se	stat	p	lwr	upr	sign
class.1.opt_out	-1.6490707	0.1483045	-11.1194923	0.0000000	-1.3583992	-1.9397422	***
class.1.Outc_curr_sym	-0.3136985	0.1016959	-3.0846711	0.0020378	-0.1143781	-0.5130189	**
class.1.Outc_curr_sym_future_sit	0.1003483	0.1721123	0.5830393	0.5598668	0.4376823	-0.2369857	n.s.
class.1.Info_sh_app_policy	0.0384812	0.1340262	0.2871167	0.7740230	0.3011677	-0.2242054	n.s.
class.1.Info_sh_user_settings	0.5080870	0.1218718	4.1690274	0.0000306	0.7469514	0.2692226	***
class.1.Soc_unmod_disc	-0.2826266	0.1532713	-1.8439631	0.0651885	0.0177796	-0.5830329	.
class.1.Soc_trained_peer_mod	0.2444976	0.1549248	1.5781695	0.1145267	0.5481447	-0.0591494	n.s.
class.1.Soc_clinician_mod	-0.0425348	0.1545944	-0.2751383	0.7832100	0.2604646	-0.3455342	n.s.
class.1.Soc_peer_clinician_mod	0.5825249	0.1677602	3.4723660	0.0005159	0.9113290	0.2537209	***
class.1.End_non_expert	0.2201741	0.0775559	2.8389067	0.0045268	0.3721810	0.0681672	**
class.1.End_expert	0.6443625	0.1268223	5.0808316	0.0000004	0.8929296	0.3957955	***
class.1.Cost	-0.0809266	0.0086397	-9.3667850	0.0000000	-0.0639930	-0.0978602	***
class.2.opt_out	-0.5297242	0.7769248	-0.6818217	0.4953517	0.9930204	-2.0524688	n.s.
class.2.Outc_curr_sym	-0.4313409	0.2669321	-1.6159197	0.1061117	0.0918365	-0.9545182	n.s.
class.2.Outc_curr_sym_future_sit	0.7225314	0.6066094	1.1910983	0.2336150	1.9114638	-0.4664011	n.s.
class.2.Info_sh_app_policy	-0.0775526	0.5392750	-0.1438089	0.8856513	0.9794071	-1.1345122	n.s.
class.2.Info_sh_user_settings	0.4035837	0.3552000	1.1362153	0.2558665	1.0997629	-0.2925955	n.s.
class.2.Soc_unmod_disc	-0.4496603	0.8295014	-0.5420851	0.5877599	1.1761325	-2.0754531	n.s.
class.2.Soc_trained_peer_mod	0.7379707	0.4196161	1.7586808	0.0786317	1.5604031	-0.0844617	.
class.2.Soc_clinician_mod	1.2285783	0.6130287	2.0041121	0.0450581	2.4300925	0.0270641	*
class.2.Soc_peer_clinician_mod	1.0239907	0.7900927	1.2960387	0.1949621	2.5725438	-0.5245625	n.s.
class.2.End_non_expert	0.5940014	0.6706500	0.8857099	0.3757739	1.9084513	-0.7204485	n.s.
class.2.End_expert	1.3345211	0.5966108	2.2368371	0.0252970	2.5038568	0.1651855	*
class.2.Cost	-0.0608117	0.0347959	-1.7476696	0.0805213	0.0073870	-0.1290104	.
class.1.sd.Cost.Cost	0.1821926	NaN	NaN	NaN	NaN	NaN	NA
class.1.sd.Cost.Outc_curr_sym	0.4606722	0.1362990	3.3798645	0.0007252	0.7278133	0.1935310	***
class.1.sd.Cost.Outc_curr_sym_future_sit	0.1634208	0.1654249	0.9878851	0.3232089	0.4876475	-0.1608060	n.s.
class.1.sd.Cost.Info_sh_app_policy	-0.1440407	0.3148816	-0.4574442	0.6473518	0.4731158	-0.7611973	n.s.
class.1.sd.Cost.Info_sh_user_settings	-0.1578762	0.0876179	-1.8018715	0.0715656	0.0138517	-0.3296042	.
class.1.sd.Cost.Soc_unmod_disc	0.1971271	0.1959497	1.0060089	0.3144113	0.5811814	-0.1869272	n.s.
class.1.sd.Cost.Soc_trained_peer_mod	0.4608763	0.2719981	1.6944102	0.0901874	0.9939827	-0.0722301	.
class.1.sd.Cost.Soc_clinician_mod	-0.0874309	0.1983626	-0.4407633	0.6593844	0.3013526	-0.4762144	n.s.

class.1.sd.Cost.Soc_peer_clinician_mod	-0.2634610	0.1719507	-1.5321887	0.1254759	0.0735563	-0.6004782	n.s.
class.1.sd.Cost.End_non_expert	-0.1724557	0.3061046	-0.5633883	0.5731705	0.4274982	-0.7724097	n.s.
class.1.sd.Cost.End_expert	-0.4216362	0.1595160	-2.6432226	0.0082121	-0.1089907	-0.7342817	**
class.1.sd.Cost.opt_out	0.0250114	0.0061520	4.0656060	0.0000479	0.0370691	0.0129538	***
class.1.sd.Outc_curr_sym.Outc_curr_sym	0.2341481	0.1127362	2.0769564	0.0378056	0.4551069	0.0131893	*
class.1.sd.Outc_curr_sym.Outc_curr_sym_future_sit	0.0414375	0.1412467	0.2933699	0.7692394	0.3182760	-0.2354009	n.s.
class.1.sd.Outc_curr_sym.Info_sh_app_policy	0.5987534	0.1928387	3.1049449	0.0019031	0.9767103	0.2207966	**
class.1.sd.Outc_curr_sym.Info_sh_user_settings	-0.0712062	0.3051029	-0.2333844	0.8154629	0.5267844	-0.6691969	n.s.
class.1.sd.Outc_curr_sym.Soc_unmod_disc	0.6715461	0.2435857	2.7569198	0.0058349	1.1489652	0.1941270	**
class.1.sd.Outc_curr_sym.Soc_trained_peer_mod	1.0797278	0.1980871	5.4507729	0.0000001	1.4679713	0.6914842	***
class.1.sd.Outc_curr_sym.Soc_clinician_mod	0.6419942	0.1598672	4.0157968	0.0000592	0.9553281	0.3286602	***
class.1.sd.Outc_curr_sym.Soc_peer_clinician_mod	0.7955621	0.2044862	3.8905425	0.0001000	1.1963476	0.3947766	***
class.1.sd.Outc_curr_sym.End_non_expert	-0.0195405	0.1304814	-0.1497571	0.8809563	0.2361984	-0.2752794	n.s.
class.1.sd.Outc_curr_sym.End_expert	-0.1456094	0.1852953	-0.7858235	0.4319709	0.2175627	-0.5087814	n.s.
class.1.sd.Outc_curr_sym.opt_out	0.0144615	0.0064717	2.2345905	0.0254442	0.0271457	0.0017773	*
class.1.sd.Outc_curr_sym_future_sit.Outc_curr_sym_future_sit	0.1175721	0.1352423	0.8693440	0.3846590	0.3826421	-0.1474980	n.s.
class.1.sd.Outc_curr_sym_future_sit.Info_sh_app_policy	0.1600997	0.2621307	0.6107628	0.5413566	0.6738665	-0.3536671	n.s.
class.1.sd.Outc_curr_sym_future_sit.Info_sh_user_settings	-0.0881763	0.2627175	-0.3356318	0.7371485	0.4267405	-0.6030932	n.s.
class.1.sd.Outc_curr_sym_future_sit.Soc_unmod_disc	0.0285973	0.1313981	0.2176387	0.8277106	0.2861328	-0.2289381	n.s.
class.1.sd.Outc_curr_sym_future_sit.Soc_trained_peer_mod	0.5056273	0.2440853	2.0715186	0.0383104	0.9840257	0.0272288	*
class.1.sd.Outc_curr_sym_future_sit.Soc_clinician_mod	0.1692728	0.1525943	1.1092996	0.2673010	0.4683522	-0.1298065	n.s.
class.1.sd.Outc_curr_sym_future_sit.Soc_peer_clinician_mod	-0.0521480	0.1833323	-0.2844452	0.7760692	0.3071766	-0.4114726	n.s.
class.1.sd.Outc_curr_sym_future_sit.End_non_expert	-0.0292323	0.2530975	-0.1154982	0.9080503	0.4668297	-0.5252943	n.s.
class.1.sd.Outc_curr_sym_future_sit.End_expert	-0.0218355	0.1444316	-0.1511821	0.8798321	0.2612453	-0.3049163	n.s.
class.1.sd.Outc_curr_sym_future_sit.opt_out	0.0391279	0.0076877	5.0896662	0.0000004	0.0541955	0.0240602	***
class.1.sd.Info_sh_app_policy.Info_sh_app_policy	0.1228900	0.1837104	0.6689330	0.5035382	0.4829558	-0.2371759	n.s.
class.1.sd.Info_sh_app_policy.Info_sh_user_settings	0.3278842	0.0678704	4.8310378	0.0000014	0.4609077	0.1948608	***
class.1.sd.Info_sh_app_policy.Soc_unmod_disc	0.0146947	0.0687230	0.2138256	0.8306831	0.1493893	-0.1199998	n.s.
class.1.sd.Info_sh_app_policy.Soc_trained_peer_mod	0.1410610	0.2609515	0.5405643	0.5888080	0.6525165	-0.3703944	n.s.
class.1.sd.Info_sh_app_policy.Soc_clinician_mod	-0.4300125	0.2460546	-1.7476304	0.0805280	0.0522457	-0.9122706	.
class.1.sd.Info_sh_app_policy.Soc_peer_clinician_mod	-0.4592692	0.2194689	-2.0926385	0.0363814	-0.0291179	-0.8894204	*
class.1.sd.Info_sh_app_policy.End_non_expert	-0.3280526	0.1423134	-2.3051420	0.0211586	-0.0491235	-0.6069818	*
class.1.sd.Info_sh_app_policy.End_expert	-0.0260882	0.1504625	-0.1733864	0.8623477	0.2688129	-0.3209892	n.s.
class.1.sd.Info_sh_app_policy.opt_out	0.0138990	0.0057619	2.4122059	0.0158563	0.0251922	0.0026058	*
class.1.sd.Info_sh_user_settings.Info_sh_user_settings	-0.1248513	0.1684803	-0.7410438	0.4586669	0.2053640	-0.4550666	n.s.
class.1.sd.Info_sh_user_settings.Soc_unmod_disc	0.2521972	0.3516695	0.7171426	0.4732861	0.9414568	-0.4370624	n.s.

class.1.sd.Info_sh_user_settings.Soc_trained_peer_mod	0.6034609	0.1802796	3.3473602	0.0008159	0.9568025	0.2501193	***
class.1.sd.Info_sh_user_settings.Soc_clinician_mod	0.0465988	0.2843748	0.1638639	0.8698383	0.6039632	-0.5107657	n.s.
class.1.sd.Info_sh_user_settings.Soc_peer_clinician_mod	0.4020526	0.1845300	2.1787925	0.0293471	0.7637247	0.0403804	*
class.1.sd.Info_sh_user_settings.End_non_expert	-0.1553351	0.1431448	-1.0851609	0.2778504	0.1252235	-0.4358937	n.s.
class.1.sd.Info_sh_user_settings.End_expert	-0.1575471	0.3141158	-0.5015573	0.6159790	0.4581086	-0.7732028	n.s.
class.1.sd.Info_sh_user_settings.opt_out	0.0000194	0.0048460	0.0040021	0.9968068	0.0095173	-0.0094785	n.s.
class.1.sd.Soc_unmod_disc.Soc_unmod_disc	-0.2756476	0.3634576	-0.7584036	0.4482094	0.4367163	-0.9880114	n.s.
class.1.sd.Soc_unmod_disc.Soc_trained_peer_mod	0.0332034	0.2340281	0.1418779	0.8871765	0.4918901	-0.4254832	n.s.
class.1.sd.Soc_unmod_disc.Soc_clinician_mod	-0.5546868	0.3113729	-1.7814231	0.0748434	0.0555928	-1.1649665	.
class.1.sd.Soc_unmod_disc.Soc_peer_clinician_mod	-0.4651583	0.2898849	-1.6046307	0.1085751	0.1030058	-1.0333223	n.s.
class.1.sd.Soc_unmod_disc.End_non_expert	-0.1066540	0.3750888	-0.2843432	0.7761474	0.6285066	-0.8418145	n.s.
class.1.sd.Soc_unmod_disc.End_expert	-0.7662889	0.3580956	-2.1399002	0.0323628	-0.0644344	-1.4681434	*
class.1.sd.Soc_unmod_disc.opt_out	0.0465591	0.0110173	4.2260162	0.0000238	0.0681525	0.0249657	***
class.1.sd.Soc_trained_peer_mod.Soc_trained_peer_mod	0.0229529	0.2557908	0.0897333	0.9284992	0.5242936	-0.4783877	n.s.
class.1.sd.Soc_trained_peer_mod.Soc_clinician_mod	0.2286548	0.1634435	1.3989835	0.1618179	0.5489982	-0.0916886	n.s.
class.1.sd.Soc_trained_peer_mod.Soc_peer_clinician_mod	-0.2581436	0.1495468	-1.7261725	0.0843164	0.0349628	-0.5512500	.
class.1.sd.Soc_trained_peer_mod.End_non_expert	-0.0725006	0.1037970	-0.6984846	0.4848742	0.1309378	-0.2759390	n.s.
class.1.sd.Soc_trained_peer_mod.End_expert	-0.1351546	0.1197152	-1.1289673	0.2589116	0.0994830	-0.3697921	n.s.
class.1.sd.Soc_trained_peer_mod.opt_out	0.0547980	0.0061440	8.9189808	0.0000000	0.0668400	0.0427560	***
class.1.sd.Soc_clinician_mod.Soc_clinician_mod	-0.2624132	0.3301371	-0.7948612	0.4266943	0.3846437	-0.9094700	n.s.
class.1.sd.Soc_clinician_mod.Soc_peer_clinician_mod	-0.2842468	0.1646819	-1.7260359	0.0843410	0.0385237	-0.6070173	.
class.1.sd.Soc_clinician_mod.End_non_expert	-0.2176134	0.1433018	-1.5185666	0.1288716	0.0632531	-0.4984798	n.s.
class.1.sd.Soc_clinician_mod.End_expert	-0.2939843	0.3608019	-0.8148080	0.4151822	0.4131745	-1.0011431	n.s.
class.1.sd.Soc_clinician_mod.opt_out	0.0481325	0.0086949	5.5356967	0.0000000	0.0651742	0.0310907	***
class.1.sd.Soc_peer_clinician_mod.Soc_peer_clinician_mod	-0.3773388	0.3763308	-1.0026787	0.3160159	0.3602559	-1.1149336	n.s.
class.1.sd.Soc_peer_clinician_mod.End_non_expert	-0.3702112	0.2252200	-1.6437756	0.1002226	0.0712119	-0.8116343	n.s.
class.1.sd.Soc_peer_clinician_mod.End_expert	0.0614444	0.2552659	0.2407074	0.8097819	0.5617563	-0.4388675	n.s.
class.1.sd.Soc_peer_clinician_mod.opt_out	0.0192551	0.0042495	4.5311861	0.0000059	0.0275839	0.0109263	***
class.1.sd.End_non_expert.End_non_expert	-0.2092627	NaN	NaN	NaN	NaN	NaN	NA
class.1.sd.End_non_expert.End_expert	-0.2546772	0.3013620	-0.8450872	0.3980622	0.3359815	-0.8453359	n.s.
class.1.sd.End_non_expert.opt_out	0.0300249	0.0051785	5.7980386	0.0000000	0.0401744	0.0198753	***
class.1.sd.End_expert.End_expert	0.2051637	0.2621462	0.7826306	0.4338441	0.7189609	-0.3086335	n.s.
class.1.sd.End_expert.opt_out	0.0147829	0.0042820	3.4523031	0.0005558	0.0231755	0.0063902	***
class.1.sd.opt_out.opt_out	0.0290374	0.0049817	5.8287926	0.0000000	0.0388014	0.0192734	***
class.2.sd.Cost.Cost	0.6651248	0.8437620	0.7882848	0.4305301	2.3188679	-0.9886184	n.s.
class.2.sd.Cost.Outc_curr_sym	0.0890304	0.2972984	0.2994648	0.7645855	0.6717246	-0.4936638	n.s.

class.2.sd.Cost.Outc_curr_sym_future_sit	0.0327638	0.4226022	0.0775288	0.9382029	0.8610488	-0.7955212	n.s.
class.2.sd.Cost.Info_sh_app_policy	1.0137018	0.7273115	1.3937657	0.1633884	2.4392060	-0.4118025	n.s.
class.2.sd.Cost.Info_sh_user_settings	0.3448398	0.6657063	0.5180059	0.6044542	1.6496001	-0.9599206	n.s.
class.2.sd.Cost.Soc_unmod_disc	-0.3143152	0.6113431	-0.5141387	0.6071550	0.8838954	-1.5125257	n.s.
class.2.sd.Cost.Soc_trained_peer_mod	0.2535173	0.7334785	0.3456370	0.7296156	1.6911087	-1.1840741	n.s.
class.2.sd.Cost.Soc_clinician_mod	0.4914543	0.6398284	0.7681033	0.4424258	1.7454949	-0.7625863	n.s.
class.2.sd.Cost.Soc_peer_clinician_mod	0.3581689	0.5230197	0.6848096	0.4934641	1.3832687	-0.6669309	n.s.
class.2.sd.Cost.End_non_expert	0.1431803	0.2333528	0.6135788	0.5394937	0.6005433	-0.3141827	n.s.
class.2.sd.Cost.End_expert	0.5279354	0.2154879	2.4499538	0.0142875	0.9502840	0.1055869	*
class.2.sd.Cost.opt_out	0.1456084	0.0487890	2.9844527	0.0028409	0.2412331	0.0499838	**
class.2.sd.Outc_curr_sym.Outc_curr_sym	0.4045354	0.6373462	0.6347185	0.5256120	1.6537110	-0.8446402	n.s.
class.2.sd.Outc_curr_sym.Outc_curr_sym_future_sit	0.7072372	0.4896900	1.4442548	0.1486673	1.6670120	-0.2525376	n.s.
class.2.sd.Outc_curr_sym.Info_sh_app_policy	0.5351467	0.5763537	0.9285040	0.3531462	1.6647793	-0.5944858	n.s.
class.2.sd.Outc_curr_sym.Info_sh_user_settings	0.0809292	0.4551080	0.1778241	0.8588611	0.9729244	-0.8110661	n.s.
class.2.sd.Outc_curr_sym.Soc_unmod_disc	1.1275558	0.3312241	3.4042087	0.0006636	1.7767431	0.4783686	***
class.2.sd.Outc_curr_sym.Soc_trained_peer_mod	0.7432506	0.6846811	1.0855427	0.2776814	2.0852009	-0.5986998	n.s.
class.2.sd.Outc_curr_sym.Soc_clinician_mod	1.2505410	0.3572562	3.5004035	0.0004646	1.9507503	0.5503316	***
class.2.sd.Outc_curr_sym.Soc_peer_clinician_mod	0.5949166	0.5289071	1.1248036	0.2606722	1.6315554	-0.4417222	n.s.
class.2.sd.Outc_curr_sym.End_non_expert	-0.1512432	0.2463842	-0.6138512	0.5393136	0.3316609	-0.6341474	n.s.
class.2.sd.Outc_curr_sym.End_expert	-0.0829475	0.3820224	-0.2171273	0.8281092	0.6658026	-0.8316976	n.s.
class.2.sd.Outc_curr_sym.opt_out	0.1119607	0.0367974	3.0426221	0.0023453	0.1840824	0.0398390	**
class.2.sd.Outc_curr_sym_future_sit.Outc_curr_sym_future_sit	0.1453103	0.4506175	0.3224694	0.7470971	1.0285043	-0.7378837	n.s.
class.2.sd.Outc_curr_sym_future_sit.Info_sh_app_policy	1.1027489	0.5173357	2.1315926	0.0330404	2.1167081	0.0887896	*
class.2.sd.Outc_curr_sym_future_sit.Info_sh_user_settings	1.2331384	0.4166775	2.9594554	0.0030818	2.0498113	0.4164656	**
class.2.sd.Outc_curr_sym_future_sit.Soc_unmod_disc	0.4315124	0.5544057	0.7783332	0.4363726	1.5181277	-0.6551029	n.s.
class.2.sd.Outc_curr_sym_future_sit.Soc_trained_peer_mod	-0.6419154	0.3043021	-2.1094673	0.0349043	-0.0454942	-1.2383367	*
class.2.sd.Outc_curr_sym_future_sit.Soc_clinician_mod	-0.0579750	0.3608149	-0.1606780	0.8723470	0.6492091	-0.7651591	n.s.
class.2.sd.Outc_curr_sym_future_sit.Soc_peer_clinician_mod	0.0107076	0.4785758	0.0223739	0.9821497	0.9486989	-0.9272837	n.s.
class.2.sd.Outc_curr_sym_future_sit.End_non_expert	0.6663042	0.5107777	1.3044895	0.1920667	1.6674101	-0.3348018	n.s.
class.2.sd.Outc_curr_sym_future_sit.End_expert	-0.0401369	0.4793310	-0.0837354	0.9332668	0.8993345	-0.9796084	n.s.
class.2.sd.Outc_curr_sym_future_sit.opt_out	0.1520587	0.0464124	3.2762492	0.0010520	0.2430254	0.0610920	**
class.2.sd.Info_sh_app_policy.Info_sh_app_policy	1.4642323	0.1458733	10.0376987	0.0000000	1.7501387	1.1783258	***
class.2.sd.Info_sh_app_policy.Info_sh_user_settings	0.9775898	0.1453738	6.7246639	0.0000000	1.2625171	0.6926624	***
class.2.sd.Info_sh_app_policy.Soc_unmod_disc	0.2813534	NaN	NaN	NaN	NaN	NaN	NA
class.2.sd.Info_sh_app_policy.Soc_trained_peer_mod	0.8926083	0.6718727	1.3285379	0.1840005	2.2094545	-0.4242379	n.s.
class.2.sd.Info_sh_app_policy.Soc_clinician_mod	0.7302737	0.5240660	1.3934767	0.1634757	1.7574242	-0.2968767	n.s.

class.2.sd.Info_sh_app_policy.Soc_peer_clinician_mod	1.0564813	0.4815437	2.1939470	0.0282392	2.0002896	0.1126730	*
class.2.sd.Info_sh_app_policy.End_non_expert	0.0692043	0.7613664	0.0908948	0.9275762	1.5614550	-1.4230465	n.s.
class.2.sd.Info_sh_app_policy.End_expert	-0.7026947	0.7215475	-0.9738718	0.3301202	0.7115123	-2.1169017	n.s.
class.2.sd.Info_sh_app_policy.opt_out	0.1392049	0.0592257	2.3504122	0.0187526	0.2552852	0.0231246	*
class.2.sd.Info_sh_user_settings.Info_sh_user_settings	0.5398669	0.3166312	1.7050337	0.0881881	1.1604527	-0.0807189	.
class.2.sd.Info_sh_user_settings.Soc_unmod_disc	0.4460452	0.5848173	0.7627087	0.4456371	1.5922661	-0.7001756	n.s.
class.2.sd.Info_sh_user_settings.Soc_trained_peer_mod	-0.2699447	0.4573776	-0.5902009	0.5550560	0.6264990	-1.1663884	n.s.
class.2.sd.Info_sh_user_settings.Soc_clinician_mod	0.4823203	0.2545854	1.8945323	0.0581544	0.9812985	-0.0166580	.
class.2.sd.Info_sh_user_settings.Soc_peer_clinician_mod	0.3064295	0.4113578	0.7449219	0.4563189	1.1126760	-0.4998171	n.s.
class.2.sd.Info_sh_user_settings.End_non_expert	0.7524449	0.3274107	2.2981679	0.0215522	1.3941581	0.1107316	*
class.2.sd.Info_sh_user_settings.End_expert	-0.1027362	0.3583309	-0.2867075	0.7743363	0.5995795	-0.8050519	n.s.
class.2.sd.Info_sh_user_settings.opt_out	0.1583431	0.0504349	3.1395536	0.0016921	0.2571936	0.0594925	**
class.2.sd.Soc_unmod_disc.Soc_unmod_disc	0.7915872	0.3360582	2.3555063	0.0184975	1.4502491	0.1329252	*
class.2.sd.Soc_unmod_disc.Soc_trained_peer_mod	-0.1158172	0.4000208	-0.2895281	0.7721773	0.6682091	-0.8998436	n.s.
class.2.sd.Soc_unmod_disc.Soc_clinician_mod	0.0452543	0.4957608	0.0912826	0.9272681	1.0169276	-0.9264189	n.s.
class.2.sd.Soc_unmod_disc.Soc_peer_clinician_mod	0.1924368	0.4333642	0.4440532	0.6570041	1.0418151	-0.6569415	n.s.
class.2.sd.Soc_unmod_disc.End_non_expert	0.0701482	0.4144943	0.1692379	0.8656095	0.8825421	-0.7422458	n.s.
class.2.sd.Soc_unmod_disc.End_expert	0.7806226	0.4592491	1.6997801	0.0891723	1.6807344	-0.1194892	.
class.2.sd.Soc_unmod_disc.opt_out	0.1613758	0.0653507	2.4693793	0.0135348	0.2894609	0.0332907	*
class.2.sd.Soc_trained_peer_mod.Soc_trained_peer_mod	-0.4012353	0.6634257	-0.6047930	0.5453165	0.8990553	-1.7015258	n.s.
class.2.sd.Soc_trained_peer_mod.Soc_clinician_mod	0.0162514	0.4263391	0.0381185	0.9695932	0.8518606	-0.8193578	n.s.
class.2.sd.Soc_trained_peer_mod.Soc_peer_clinician_mod	0.5418034	0.3775182	1.4351718	0.1512382	1.2817255	-0.1981186	n.s.
class.2.sd.Soc_trained_peer_mod.End_non_expert	-0.0096341	0.4506629	-0.0213776	0.9829445	0.8736490	-0.8929171	n.s.
class.2.sd.Soc_trained_peer_mod.End_expert	0.3706088	0.3677589	1.0077494	0.3135748	1.0914030	-0.3501854	n.s.
class.2.sd.Soc_trained_peer_mod.opt_out	0.1690951	0.0486697	3.4743372	0.0005121	0.2644861	0.0737042	***
class.2.sd.Soc_clinician_mod.Soc_clinician_mod	0.6855128	0.8177125	0.8383299	0.4018455	2.2881999	-0.9171742	n.s.
class.2.sd.Soc_clinician_mod.Soc_peer_clinician_mod	0.5580904	0.7578330	0.7364293	0.4614695	2.0434159	-0.9272350	n.s.
class.2.sd.Soc_clinician_mod.End_non_expert	0.1239287	0.4182637	0.2962933	0.7670061	0.9437105	-0.6958531	n.s.
class.2.sd.Soc_clinician_mod.End_expert	-0.4984099	0.3225367	-1.5452812	0.1222783	0.1337504	-1.1305703	n.s.
class.2.sd.Soc_clinician_mod.opt_out	0.1678819	0.0622853	2.6953681	0.0070311	0.2899588	0.0458049	**
class.2.sd.Soc_peer_clinician_mod.Soc_peer_clinician_mod	0.5457497	0.5432074	1.0046801	0.3150509	1.6104167	-0.5189173	n.s.
class.2.sd.Soc_peer_clinician_mod.End_non_expert	-0.2347075	0.4271970	-0.5494127	0.5827223	0.6025833	-1.0719983	n.s.
class.2.sd.Soc_peer_clinician_mod.End_expert	0.2736449	0.5444216	0.5026341	0.6152215	1.3406916	-0.7934019	n.s.
class.2.sd.Soc_peer_clinician_mod.opt_out	0.1550782	0.0643538	2.4097749	0.0159624	0.2812093	0.0289470	*
class.2.sd.End_non_expert.End_non_expert	0.6906396	0.2445989	2.8235594	0.0047494	1.1700447	0.2112345	**
class.2.sd.End_non_expert.End_expert	0.0423271	0.6712590	0.0630563	0.9497217	1.3579705	-1.2733163	n.s.

class.2.sd.End_non_expert.opt_out	0.1281159	0.0414750	3.0889881	0.0020084	0.2094055	0.0468263	**
class.2.sd.End_expert.End_expert	-0.5121666	0.3336065	-1.5352416	0.1247245	0.1416902	-1.1660233	n.s.
class.2.sd.End_expert.opt_out	0.1627856	0.0547430	2.9736323	0.0029430	0.2700800	0.0554913	**
class.2.sd.opt_out.opt_out	0.1580450	0.0662243	2.3865090	0.0170092	0.2878423	0.0282477	*
(class)2	-1.5995688	0.4913030	-3.2557685	0.0011309	-0.6366326	-2.5625050	**
der_age_u20:class2	-1.0158016	0.2299009	-4.4184316	0.0000099	-0.5652040	-1.4663991	***
class2:der_gender_male	-0.1294288	0.2323384	-0.5570704	0.5774793	0.3259460	-0.5848037	n.s.
class2:der_gender_opnts	-2.2979518	1.4830755	-1.5494504	0.1212735	0.6088227	-5.2047263	n.s.
class2:der_SIAS_nr	1.7854344	0.4728808	3.7756542	0.0001596	2.7122637	0.8586050	***
class2:der_SIAS_sa	1.5628904	0.4272079	3.6583834	0.0002538	2.4002026	0.7255783	***
class2:der_urban	-0.3697952	0.2367543	-1.5619369	0.1183028	0.0942346	-0.8338250	n.s.
class2:der_STE_VIC	-0.7020412	0.4391720	-1.5985562	0.1099192	0.1587202	-1.5628026	n.s.
class2:der_STE_QLD	-0.4039295	0.3868527	-1.0441428	0.2964193	0.3542879	-1.1621468	n.s.
class2:der_STE_SA	-1.2298922	0.6930755	-1.7745427	0.0759734	0.1285110	-2.5882953	.
class2:der_STE_WA	-0.6556362	0.2707839	-2.4212526	0.0154671	-0.1249095	-1.1863629	*
class2:der_STE_ACT	-3.3583977	NaN	NaN	NaN	NaN	NaN	NA
class2:der_STE_TAS	1.2828969	0.4218437	3.0411666	0.0023566	2.1096953	0.4560985	**
class2:der_SEIFA_Q1	-1.9485571	0.2144876	-9.0847077	0.0000000	-1.5281691	-2.3689451	***
class2:der_SEIFA_Q2	-1.5375471	0.4532903	-3.3919698	0.0006939	-0.6491144	-2.4259798	***
class2:der_SEIFA_Q4	-0.7073899	0.2844159	-2.4871676	0.0128765	-0.1499451	-1.2648348	*
class2:rc_pilot_participant	0.2028772	0.3024392	0.6708032	0.5023459	0.7956471	-0.3898927	n.s.
class2:der_under_ten_mins	0.5457698	0.2007045	2.7192699	0.0065426	0.9391435	0.1523962	**

Note:

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Table 31: Mixed mixed with correlated random parameters (estimated with gmm1 package)

Statistic	Value
logLik	-2507.159
AIC	5410.317
BIC	6613.898
N	3225.000

4 Applying choice models

4.1 Generating Willingness To Pay Estimates

4.1.1 Willingness To Pay Estimates from Utility Space

We can use the output of the Multinomial Logit Model we estimated to calculate Willingness To Pay values from utility space.

Table 32: Willingness to pay estimated from utility space using multinomial logit model (estimated with gmn1 package)

Parameter	Estimate	Std. Error	t-value	Pr(> t)	sign
opt_out	-21.063399	2.696931	7.810137	0.0000000	***
Outcomes_curr_sym	-6.903538	1.703917	4.051570	0.0000509	***
Outcomes_curr_sym_future_sit	5.338594	1.503190	-3.551511	0.0003830	***
Information_sharing_app_policy	-1.607790	1.937362	0.829886	0.4066032	n.s.
Information_sharing_user_settings	5.724191	1.391826	-4.112720	0.0000391	***
Social_unmod_disc	-6.263271	2.280858	2.746015	0.0060324	**
Social_trained_peer_mod	7.046178	2.042073	-3.450503	0.0005595	***
Social_clinician_mod	6.670704	1.977217	-3.373784	0.0007414	***
Social_peer_clinician_mod	11.779540	1.941916	-6.065936	0.0000000	***
Endorsers_non_expert	5.741062	1.512820	-3.794940	0.0001477	***
Endorsers_expert	15.998268	1.400063	-11.426822	0.0000000	***

Note:

Signif. codes: 0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

4.1.2 Willingness To Pay Estimates from WTP Space

Alternatively we can use the Scaled Multinomial Logit Model to calculate Willingness to Pay Values from Willingness To Pay space.

Table 33: Willingness to pay estimated from willingness to pay space using a scaled multinomial logit model (estimated with gmm1 package)

Parameter	Estimate	Std. Error	z-value	Pr(> z)	sign
opt_out	-21.063880	2.7649288	-7.6182360	0.0000000	***
Outcomes_curr_sym	-6.903880	1.7410062	-3.9654541	0.0000733	***
Outcomes_curr_sym_future_sit	5.337832	1.5053232	3.5459709	0.0003912	***
Information_sharing_app_policy	-1.608555	1.9447278	-0.8271361	0.4081599	n.s.
Information_sharing_user_settings	5.724088	1.4012893	4.0848723	0.0000441	***
Social_unmod_disc	-6.263351	2.3025342	-2.7201989	0.0065243	**
Social_trained_peer_mod	7.045781	2.1081270	3.3421996	0.0008312	***
Social_clinician_mod	6.670416	2.0328516	3.2813100	0.0010333	**
Social_peer_clinician_mod	11.778776	1.9382075	6.0771495	0.0000000	***
Endorsers_non_expert	5.740878	1.5111403	3.7990370	0.0001453	***
Endorsers_expert	15.997951	1.3948278	11.4694806	0.0000000	***
het.(Intercept)	-3.135348	0.0442928	-70.7869091	0.0000000	***

Note:

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

4.1.3 Willingness To Pay Heterogeneity

We can also explore how WTP values vary across individuals.

Table 34: Willingness to pay estimated from generalised multinomial logit model with correlated random parameters (estimated with gmm package)

Parameter	est	se	stat	p	lwr	upr	sign
opt_out	-24.1018400	1.8049932	-13.3528699	0.0000000	-20.5641182	-27.6395617	***
Outc_curr_sym	-3.8150193	1.2711358	-3.0012682	0.0026886	-1.3236390	-6.3063996	**
Outc_curr_sym_future_sit	4.9300912	1.0935924	4.5081616	0.0000065	7.0734930	2.7866895	***
Info_sh_app_policy	1.5420310	1.5996784	0.9639631	0.3350644	4.6773431	-1.5932811	n.s.
Info_sh_user_settings	5.5577167	0.9204283	6.0381856	0.0000000	7.3617230	3.7537105	***
Soc_unmod_disc	-2.0045928	1.5994388	-1.2533101	0.2100929	1.1302496	-5.1394353	n.s.
Soc_trained_peer_mod	7.1855258	1.2352256	5.8171771	0.0000000	9.6065234	4.7645282	***
Soc_clinician_mod	6.8333145	1.1599069	5.8912611	0.0000000	9.1066903	4.5599387	***
Soc_peer_clinician_mod	9.6166130	1.1086289	8.6743298	0.0000000	11.7894858	7.4437402	***
End_non_expert	5.4294157	0.9539921	5.6912583	0.0000000	7.2992060	3.5596255	***
End_expert	13.6912867	1.0313950	13.2745327	0.0000000	15.7127837	11.6697896	***
het.(Intercept)	-1.8813757	0.1106492	-17.0030619	0.0000000	-1.6645072	-2.0982442	***
sd.Outc_curr_sym.Outc_curr_sym	-11.4701786	1.9431756	-5.9028007	0.0000000	-7.6616243	-15.2787329	***
sd.Outc_curr_sym.Outc_curr_sym_future_sit	8.6611109	1.1106387	7.7983154	0.0000000	10.8379228	6.4842990	***
sd.Outc_curr_sym.Info_sh_app_policy	8.2040852	1.1190849	7.3310659	0.0000000	10.3974513	6.0107191	***
sd.Outc_curr_sym.Info_sh_user_settings	12.8027561	1.3929858	9.1908736	0.0000000	15.5329581	10.0725542	***
sd.Outc_curr_sym.Soc_unmod_disc	3.2124361	0.9099023	3.5305287	0.0004147	4.9958117	1.4290604	***
sd.Outc_curr_sym.Soc_trained_peer_mod	11.3894748	1.3431910	8.4794158	0.0000000	14.0220807	8.7568688	***
sd.Outc_curr_sym.Soc_clinician_mod	10.6488617	1.2561937	8.4770859	0.0000000	13.1109560	8.1867673	***
sd.Outc_curr_sym.Soc_peer_clinician_mod	10.3078229	1.3094386	7.8719405	0.0000000	12.8742755	7.7413704	***
sd.Outc_curr_sym.End_non_expert	7.7732943	1.1942273	6.5090578	0.0000000	10.1139367	5.4326519	***
sd.Outc_curr_sym.End_expert	0.0044559	1.0506018	0.0042413	0.9966160	2.0635976	-2.0546859	n.s.
sd.Outc_curr_sym.opt_out	-1.7678265	1.1356599	-1.5566514	0.1195533	0.4580259	-3.9936789	n.s.
sd.Outc_curr_sym_future_sit.Outc_curr_sym_future_sit	0.2464574	1.1006518	0.2239195	0.8228200	2.4036952	-1.9107804	n.s.
sd.Outc_curr_sym_future_sit.Info_sh_app_policy	-0.1309451	1.0078657	-0.1299232	0.8966272	1.8444353	-2.1063255	n.s.
sd.Outc_curr_sym_future_sit.Info_sh_user_settings	6.8471858	1.2820164	5.3409501	0.0000001	9.3598918	4.3344797	***
sd.Outc_curr_sym_future_sit.Soc_unmod_disc	7.4472070	1.0672048	6.9782361	0.0000000	9.5388899	5.3555240	***

sd.Outc_curr_sym_future_sit.Soc_trained_peer_mod	-2.3941093	1.2915534	-1.8536665	0.0637869	0.1372888	-4.9255073	.
sd.Outc_curr_sym_future_sit.Soc_clinician_mod	1.8561470	1.0392659	1.7860174	0.0740964	3.8930708	-0.1807768	.
sd.Outc_curr_sym_future_sit.Soc_peer_clinician_mod	-1.5978637	1.1993853	-1.3322356	0.1827828	0.7528883	-3.9486157	n.s.
sd.Outc_curr_sym_future_sit.End_non_expert	0.9733270	1.1321628	0.8597059	0.3899512	3.1923254	-1.2456713	n.s.
sd.Outc_curr_sym_future_sit.End_expert	2.6276684	0.9589376	2.7401870	0.0061404	4.5071515	0.7481852	**
sd.Outc_curr_sym_future_sit.opt_out	1.9159470	0.9130291	2.0984511	0.0358653	3.7054512	0.1264428	*
sd.Info_sh_app_policy.Info_sh_app_policy	3.2555275	0.9327691	3.4901751	0.0004827	5.0837213	1.4273337	***
sd.Info_sh_app_policy.Info_sh_user_settings	6.3827416	1.3266401	4.8112080	0.0000015	8.9829085	3.7825748	***
sd.Info_sh_app_policy.Soc_unmod_disc	5.2971929	0.8624723	6.1418703	0.0000000	6.9876075	3.6067783	***
sd.Info_sh_app_policy.Soc_trained_peer_mod	-0.9837160	1.3129165	-0.7492602	0.4537004	1.5895530	-3.5569849	n.s.
sd.Info_sh_app_policy.Soc_clinician_mod	0.1007585	0.9764628	0.1031873	0.9178143	2.0145904	-1.8130733	n.s.
sd.Info_sh_app_policy.Soc_peer_clinician_mod	0.1391275	1.2484135	0.1114435	0.9112647	2.5859730	-2.3077179	n.s.
sd.Info_sh_app_policy.End_non_expert	1.1914774	1.1918180	0.9997142	0.3174488	3.5273977	-1.1444429	n.s.
sd.Info_sh_app_policy.End_expert	-3.9707001	1.1190273	-3.5483496	0.0003877	-1.7774469	-6.1639533	***
sd.Info_sh_app_policy.opt_out	-0.1675892	0.8688047	-0.1928962	0.8470402	1.5352368	-1.8704151	n.s.
sd.Info_sh_user_settings.Info_sh_user_settings	8.2205049	1.2983218	6.3316388	0.0000000	10.7651689	5.6758408	***
sd.Info_sh_user_settings.Soc_unmod_disc	1.8084248	1.1427120	1.5825726	0.1135189	4.0480992	-0.4312496	n.s.
sd.Info_sh_user_settings.Soc_trained_peer_mod	1.8710195	1.9261723	0.9713666	0.3313657	5.6462478	-1.9042088	n.s.
sd.Info_sh_user_settings.Soc_clinician_mod	0.0574114	1.2745767	0.0450435	0.9640727	2.5555358	-2.4407131	n.s.
sd.Info_sh_user_settings.Soc_peer_clinician_mod	-1.7112277	1.5273743	-1.1203722	0.2625552	1.2823710	-4.7048264	n.s.
sd.Info_sh_user_settings.End_non_expert	0.9408668	1.2355360	0.7615050	0.4463555	3.3624728	-1.4807392	n.s.
sd.Info_sh_user_settings.End_expert	1.2306000	1.1239048	1.0949326	0.2735462	3.4334128	-0.9722129	n.s.
sd.Info_sh_user_settings.opt_out	2.8855241	1.1402640	2.5305754	0.0113876	5.1204006	0.6506477	*
sd.Soc_unmod_disc.Soc_unmod_disc	1.7012498	0.9450009	1.8002625	0.0718192	3.5534176	-0.1509180	.
sd.Soc_unmod_disc.Soc_trained_peer_mod	8.8728573	1.3201746	6.7209725	0.0000000	11.4603520	6.2853626	***
sd.Soc_unmod_disc.Soc_clinician_mod	5.6907972	1.2212599	4.6597758	0.0000032	8.0844226	3.2971718	***
sd.Soc_unmod_disc.Soc_peer_clinician_mod	2.8067253	1.2949020	2.1675195	0.0301953	5.3446865	0.2687641	*
sd.Soc_unmod_disc.End_non_expert	6.5118036	1.3846212	4.7029496	0.0000026	9.2256113	3.7979960	***
sd.Soc_unmod_disc.End_expert	-1.6625163	1.1091764	-1.4988746	0.1339062	0.5114294	-3.8364620	n.s.
sd.Soc_unmod_disc.opt_out	1.3208230	1.0945175	1.2067628	0.2275235	3.4660379	-0.8243919	n.s.
sd.Soc_trained_peer_mod.Soc_trained_peer_mod	-1.6409831	1.2019669	-1.3652481	0.1721751	0.7148288	-3.9967950	n.s.
sd.Soc_trained_peer_mod.Soc_clinician_mod	-1.6681348	0.9434904	-1.7680464	0.0770532	0.1810724	-3.5173421	.
sd.Soc_trained_peer_mod.Soc_peer_clinician_mod	0.0058331	0.8441545	0.0069100	0.9944866	1.6603456	-1.6486793	n.s.
sd.Soc_trained_peer_mod.End_non_expert	-1.2717652	0.9500206	-1.3386711	0.1806778	0.5902411	-3.1337714	n.s.
sd.Soc_trained_peer_mod.End_expert	3.7634408	0.9298950	4.0471675	0.0000518	5.5860015	1.9408801	***
sd.Soc_trained_peer_mod.opt_out	4.0618987	1.1699955	3.4717215	0.0005171	6.3550478	1.7687496	***

sd.Soc_clinician_mod.Soc_clinician_mod	-0.5745918	1.2410513	-0.4629880	0.6433730	1.8578240	-3.0070076	n.s.
sd.Soc_clinician_mod.Soc_peer_clinician_mod	-3.1655611	1.3616070	-2.3248714	0.0200788	-0.4968605	-5.8342617	*
sd.Soc_clinician_mod.End_non_expert	-3.5862047	1.1926611	-3.0068934	0.0026393	-1.2486320	-5.9237775	**
sd.Soc_clinician_mod.End_expert	-0.1083901	1.0436778	-0.1038540	0.9172852	1.9371807	-2.1539610	n.s.
sd.Soc_clinician_mod.opt_out	-4.7581658	1.1321490	-4.2027736	0.0000264	-2.5391946	-6.9771369	***
sd.Soc_peer_clinician_mod.Soc_peer_clinician_mod	-0.2001764	1.0341130	-0.1935731	0.8465102	1.8266477	-2.2270006	n.s.
sd.Soc_peer_clinician_mod.End_non_expert	-0.9639443	1.2846025	-0.7503833	0.4530239	1.5538303	-3.4817190	n.s.
sd.Soc_peer_clinician_mod.End_expert	5.3103170	0.9965872	5.3285024	0.0000001	7.2635919	3.3570421	***
sd.Soc_peer_clinician_mod.opt_out	2.6574454	0.8243623	3.2236377	0.0012657	4.2731658	1.0417250	**
sd.End_non_expert.End_non_expert	0.1349603	0.9870978	0.1367243	0.8912487	2.0696364	-1.7997158	n.s.
sd.End_non_expert.End_expert	-1.2427943	0.8857683	-1.4030692	0.1605962	0.4932798	-2.9788683	n.s.
sd.End_non_expert.opt_out	0.2035629	1.1908719	0.1709360	0.8642741	2.5376288	-2.1305031	n.s.
sd.End_expert.End_expert	-0.4041969	0.7704768	-0.5246062	0.5998570	1.1059098	-1.9143036	n.s.
sd.End_expert.opt_out	3.0856237	0.8986608	3.4335798	0.0005957	4.8469666	1.3242808	***
sd.opt_out.opt_out	-4.8409905	1.2003045	-4.0331354	0.0000550	-2.4884369	-7.1935441	***
tau	1.0848823	0.0825750	13.1381464	0.0000000	1.2467263	0.9230383	***

Note:

Signif. codes: 0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

4.2 Predicting Market Share

4.2.1 Market share predictions using the same choice situations as that used in the original survey

Table 35: Market share predictions from multinomial logit models compared to observed sample proportions

Alternative	Predictions (MNL model, gmnln package)	Predictions (MNL model, mlogit package)	Observed
Social Anxiety App A	0.3469779	0.3247964	0.3586420
Social Anxiety App B	0.4391332	0.4656007	0.4274691
Do not use a social anxiety app	0.2138889	0.2096029	0.2138889

Table 36: Market share predictions from mixed logit models (estimated with gmnln package)

Alternative	Mean	SD
Social Anxiety App A	0.3669715	0.2178513
Social Anxiety App B	0.4200165	0.2142072
Do not use a social anxiety app	0.2130120	0.1733450

Table 37: Market share predictions from mixed logit models (estimated with mlogit package)

Alternative	Mean	SD
Social Anxiety App A	0.3764415	0.1925379
Social Anxiety App B	0.4055234	0.1883529
Do not use a social anxiety app	0.2180350	0.1631860

4.2.2 Market share predictions using new choice situations

We created a hypothetical choice situation where: - the Entourage app had a \$25 cost, was endorsed by experts, had both peer and clinician moderators, provided knowledge and skills to manage future situations and shared no information with app users' treating clinicians; and - a competing app had a \$0 cost, had no endorsers, had no discussions with other app users, provided knowledge and skills to manage future situations and shared no information with app users' treating clinicians.

The market share predictions from both a multinomial model and mixed logit model for each app under this choice situation is summarised in the following table.

Table 38: Market share predictions from multinomial and mixed logit models (both estimated with mlogit package) of hypothetical choice situation one

Alternative	mnln_mlogit_mdln_prediction	mixln_mlogit_mdln_prediction
Entourage	0.4462611	0.3552592
Competing App	0.3954856	0.4546048
No App	0.1582533	0.1901360

We then changed the configuration of the Entourage app by adding a user controlled setting for app information sharing. The market share predictions under this modified scenario are summarised in the next table.

Table 39: Market share predictions from multinomial and mixed logit models (both estimated with mlogit package) of hypothetical choice situation two

Alternative	mn_l_mlogit_md_l_prediction	mix_l_mlogit_md_l_prediction
Entourage	0.5082794	0.4018983
Competing App	0.3511915	0.4506653
No App	0.1405291	0.1474364

We reran the first hypothetical choice situation adjusting the price between \$25 and \$50.

Table 40: Market share predictions from multinomial logit models (estimated with mlogit package) of hypothetical choice situation three

Cost	Entourage	Competing App	No App
25	0.4462611	0.3954856	0.1582533
30	0.3933605	0.4332677	0.1733718
35	0.3428481	0.4693441	0.1878077
40	0.2956609	0.5030457	0.2012934
45	0.2524730	0.5338909	0.2136361
50	0.2136799	0.5615973	0.2247228

Table 41: Market share predictions from mixed logit models (estimated with mlogit package) of hypothetical choice situation three

Cost	Entourage	Competing App	No App
25	0.3552592	0.4546048	0.1901360
30	0.3330646	0.4658380	0.2010974
35	0.3171806	0.4736067	0.2092127
40	0.3054732	0.4791791	0.2153477
45	0.2965875	0.4833188	0.2200937

50	0.2896663	0.4864848	0.2238489
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