## TEST

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## PHQ9 with SOFAS Generalised Linear Mixed Model with Gaussian distribution and log

Table 1: PHQ9 with SOFAS Generalised Linear Mixed Model with Gaussian distribution and log link

Parameter Est. Error l-95% CI u-95% CI Rhat Bulk ESS Ta	Estimate	Est.Error	1-95% CI	u-95% CI	Rhat	Estimate Est.Error 1-95% CI u-95% CI Rhat Bulk ESS Tail ESS	Tail ESS
Group-Level Effects:							
fkClientID (Number of levels: 1034)							
$\operatorname{sd}(\operatorname{Intercept})$	0.10	0.01	0.08	0.12	1.00	599	1 106
Population-Level Effects:							
Intercept	-0.03	0.04	-0.11	0.04	1.00	4 700	5 335
PHQ9_baseline	-3.86	0.08	-4.03	-3.70	1.00	3 647	4 904
PHQ9_change	-2.45	0.13	-2.70	-2.20	1.00	1 342	$3\ 300$
SOFAS_baseline	0.01	0.00	-0.10	0.12	1.00	4 767	5 393
SOFAS_change	0.41	0.07	0.27	0.55	1.00	6621	6049
Family Specific Parameters:							
sigma	0.10	0.00	0.00	0.10	1.01	661	1 473

 $Formula: aqol6d\_total\_w \sim PHQ9\_baseline + PHQ9\_change + SOFAS\_baseline + SOFAS\_change + (1 \mid fkClientID)$ 

Family: gaussian

Links: mu = log; sigma = identity

Data: data\_tb (Number of observations: 1651)

Samples: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup samples = 8000

Samples were drawn using sampling(NUTS). For each parameter, Bulk\_ESS

and Tail\_ESS are effective sample size measures, and Rhat is the potential

scale reduction factor on split chains (at convergence, Rhat = 1).

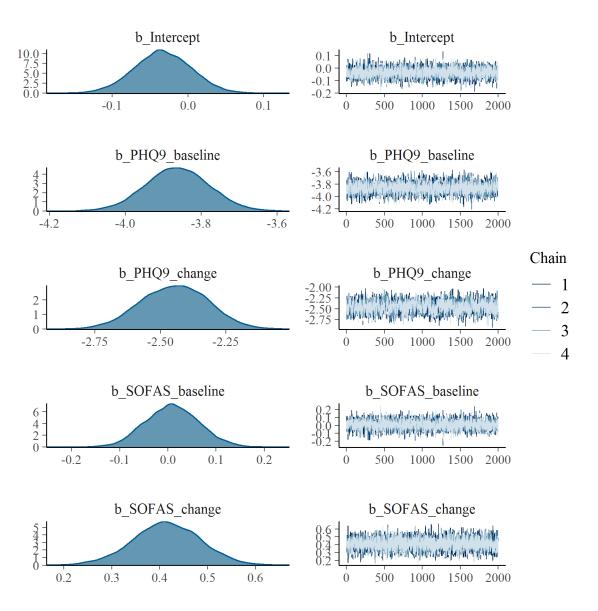


Figure 1: PHQ9 with SOFAS Generalised Linear Mixed Model with Gaussian distribution and log link population level effects

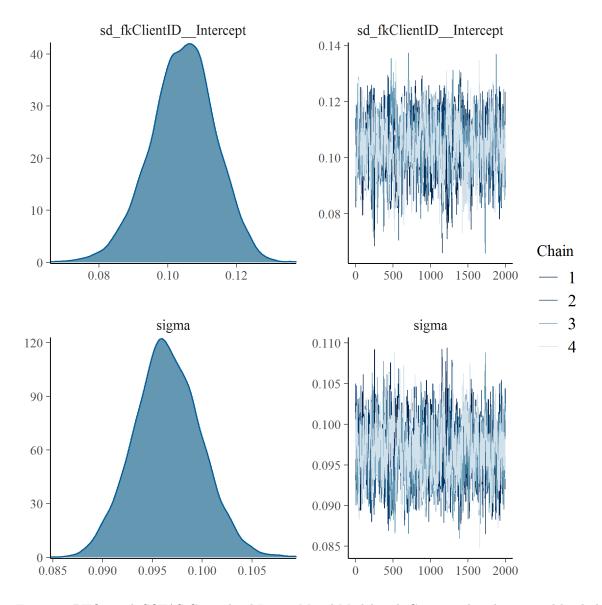


Figure 2: PHQ9 with SOFAS Generalised Linear Mixed Model with Gaussian distribution and  $\log$  link group level effects

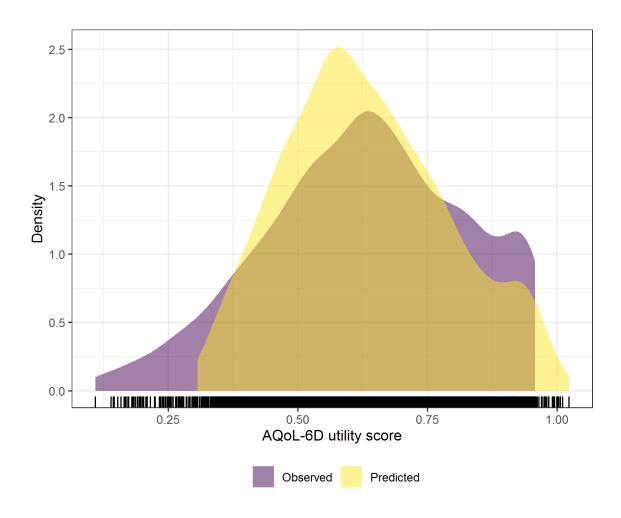


Figure 3: PHQ9 with SOFAS Generalised Linear Mixed Model with Gaussian distribution and  $\log \sinh \cos \theta$  comparative densities of observed and predicted data

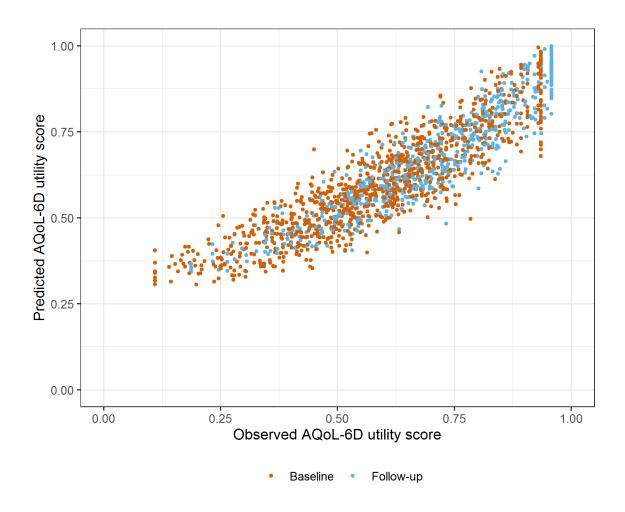


Figure 4: PHQ9 with SOFAS Generalised Linear Mixed Model with Gaussian distribution and  $\log \sinh \cos \theta$  comparative scatter plot of observed and predicted data

## PHQ9 with SOFAS Linear Mixed Model with clog-log transformation 2

Table 2: PHQ9 with SOFAS Linear Mixed Model with clog-log transformation

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Parameter	$\operatorname{Estimate}$	$\operatorname{Est.Error}$	1-95% CI	Estimate Est.Error l-95% CI u-95% CI	$\operatorname{Rhat}$	Rhat Bulk_ESS Tail_ESS	${ m Tail\_ESS}$
Group-Level Effects:							
fkClientID (Number of levels: 1034)							
sd(Intercept)	0.27	0.01	0.25	0.29	1.01	1 218	2564
Population-Level Effects:							
Intercept	0.91	0.08	0.76	1.07	1.00	2860	4 477
PHQ9_baseline	-7.73	0.17	-8.06	-7.38	1.00	2 643	4098
PHQ9_change	-4.48	0.22	-4.90	-4.05	1.00	2872	5 188
SOFAS_baseline	0.02	0.12	-0.20	0.25	1.00	2 874	4 790
SOFAS_change	1.04	0.14	0.77	1.31	1.00	4 486	5 491
Family Specific Parameters:							
sigma	0.26	0.01	0.24	0.27	0.27   1.00	1 317	3036

Formula:  $aqol6d\_total\_w\_cloglog \sim PHQ9\_baseline + PHQ9\_change + SOFAS\_baseline + SOFAS\_change + (1 | fkClientID)$ 

Family: gaussian

Links: mu = identity; sigma = identity

Data: data\_tb (Number of observations: 1651)

Samples: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup samples = 8000

Samples were drawn using sampling (NUTS). For each parameter, Bulk\_ESS

and Tail\_ESS are effective sample size measures, and Rhat is the potential

scale reduction factor on split chains (at convergence, Rhat = 1).

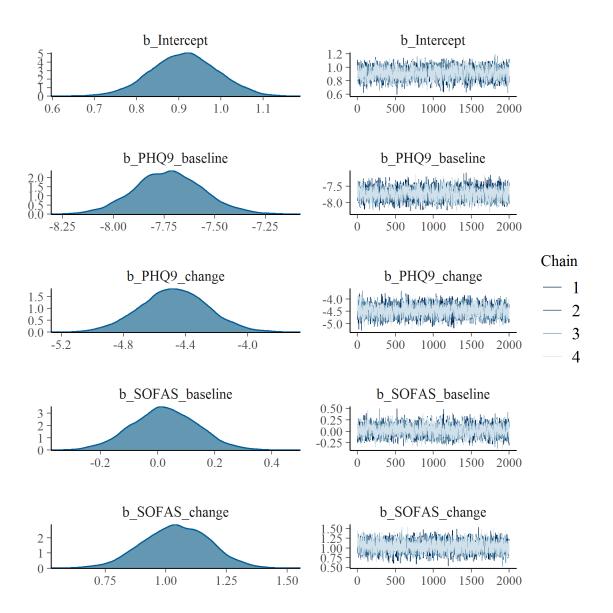


Figure 5: PHQ9 with SOFAS Linear Mixed Model with clog-log transformation population level effects

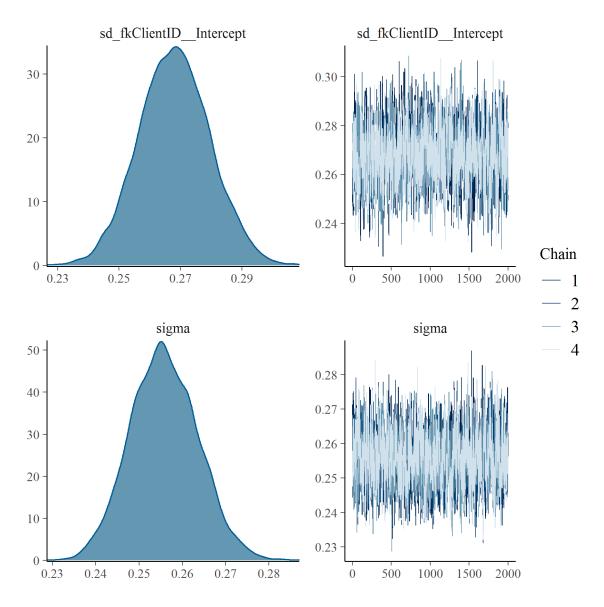


Figure 6: PHQ9 with SOFAS Linear Mixed Model with clog-log transformation group level effects

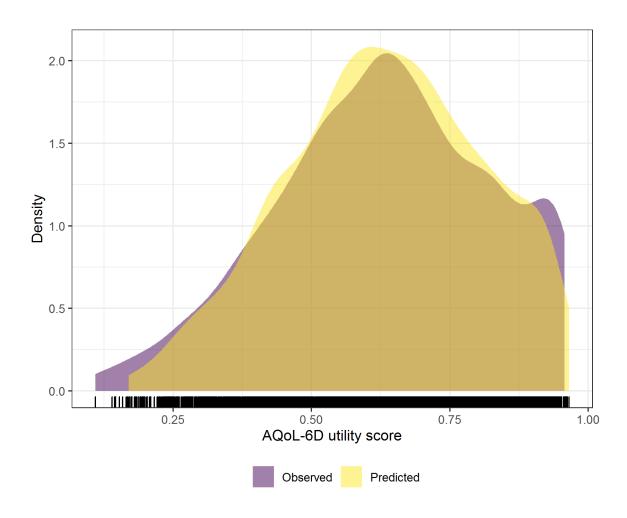
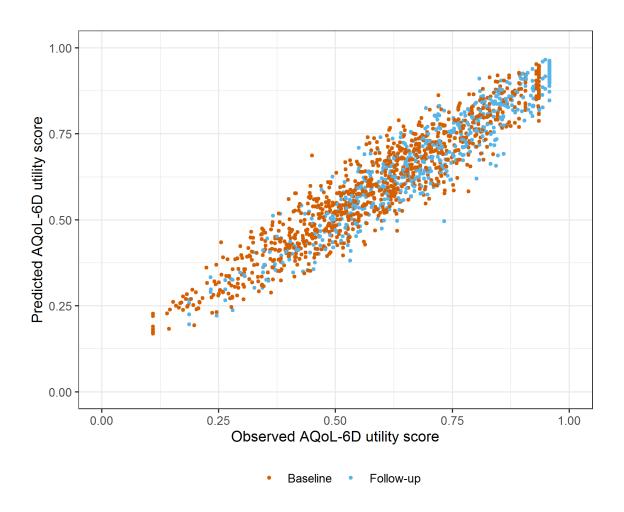


Figure 7: PHQ9 with SOFAS Linear Mixed Model with clog-log transformation comparative densities of observed and predicted data  $\frac{1}{2}$ 



Figure~8:~PHQ9~with~SOFAS~Linear~Mixed~Model~with~clog-log~transformation~comparative~scatter~plot~of~observed~and~predicted~data