

Supplementary Materials for
Gamma Auditory Entrainment Reverses Working Memory Deficits in a
Rodent Model of Autism

Jorge Cardoso *et al.*

*Corresponding author. Email: miguel.remondes@gimm.pt

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Supplementary Text

Table 1

Tables 2 to 3

Figs. S1 to S2 (multi-page .pdf)

Supplementary Text

We are here providing Table 1 with the numbers of sessions per each animal whose behavior is robust enough to be modeled by Logit and SSM estimates, as explained in the main text, GLMM analysis Tables 2 and 3 for performance and LRB results, respectively, and Figures S1 and S2 with the raw behavioral data for each individual animal in each experimental group (S1), and likewise logit and SSM estimates with 95% CI bars (S2).

Table 1

NUMBER OF SESSIONS FOR EACH ANIMAL

CTRL									
	CTRL MRE313	CTRL MRE315	CTRL MRE325	CTRL MRE326	CTRL MRE327				
95%CI clears									
50%	4	4	3	3	2				
SSM stable	5	6	4	4	5				

VPA 400 mg									
	V400 MRE341	V400 MRE342	V400 MRE343	V400 MRE344	V400 MRE345	V400 MRE346			
95%CI clears									
50%	1	2	0	0	1	2			
SSM stable	5	3	0	0	2	4			

VPA 600 mg									
	V600 MRE378	V600 MRE379	V600 MRE380	V600 MRE389	V600 MRE390	V600 MRE391	V600 MRE392		
95%CI clears									
50%	0	3	0	0	2	1	4		
SSM stable	3	3	3	4	3	2	6		
	V600 MRE393	V600 MRE394	V600 MRE407	V600 MRE408	V600 MRE409	V600 MRE410	V600 MRE412	V600 MRE413	V600 MRE468
95%CI clears									
50%	2	0	1	0	1	4	2	0	2
SSM stable	3	0	3	4	4	4	4	2	3

Table 2 Comparing CTL's, V400 and V600 groups

Generalized Mixed Model

Model Info

Info	Value	Comment
Model Type	Logistic	Model for binary y
Call	glm	BinaryTrialOutcome ~ 1 + Group + Session + Group:Session + (1 + Group Rat)
Link function	Logit	Log of the odd of y=1 over y=0
Direction	P(y=1)/P(y=0)	P(BinaryTrialOutcome = 1) / P(BinaryTrialOutcome = 0)
Distribution	Binomial	Dichotomous event distribution of y
LogLikel.	-2030.3641	Unconditional Log-Likelihood
-2*LogLikel.	4060.7282	Unconditional absolute deviance
Deviance	4014.7748	Conditional relative deviance
R-squared	0.0276	Marginal
R-squared	0.0522	Conditional
AIC	4108.7300	Less is better
BIC	4254.7281	Less is better
Residual DF	3216.0000	
Chi-squared/DF	0.9942	Overdispersion indicator
Converged	yes	
Optimizer	bobyqa	

[3]

Model Results

Fixed Effect Omnibus tests

	X ²	df	p
Group	15.05	2.00	<.001
Session	30.79	5.00	<.001
Group * Session	6.83	10.00	0.742

Fixed Effects Parameter Estimates

Names	Effect	Estimate	SE	exp(B)	95% Exp(B) Confidence Interval		z	p
					Lower	Upper		
(Intercept)	(Intercept)	0.7501	0.0725	2.117	1.837	2.440	10.346	<.001
Group1	V400 - CTL	-0.5572	0.1981	0.573	0.389	0.844	-2.814	0.005
Group2	V600 - CTL	-0.4789	0.1352	0.619	0.475	0.807	-3.541	<.001
Session1	2 - 1	0.3927	0.1469	1.481	1.110	1.975	2.673	0.008
Session2	3 - 1	0.7263	0.1527	2.067	1.533	2.789	4.755	<.001
Session3	4 - 1	0.5742	0.1512	1.776	1.320	2.388	3.797	<.001
Session4	5 - 1	0.6353	0.1497	1.888	1.408	2.531	4.243	<.001
Session5	6 - 1	0.3491	0.1442	1.418	1.069	1.881	2.422	0.015
Group1 * Session1	V400 - CTL * 2 - 1	-0.4585	0.4095	0.632	0.283	1.411	-1.120	0.263
Group2 * Session1	V600 - CTL * 2 - 1	-0.4816	0.3511	0.618	0.310	1.230	-1.371	0.170
Group1 * Session2	V400 - CTL * 3 - 1	-0.3770	0.4266	0.686	0.297	1.583	-0.884	0.377
Group2 * Session2	V600 - CTL * 3 - 1	-0.4551	0.3672	0.634	0.309	1.303	-1.239	0.215
Group1 * Session3	V400 - CTL * 4 - 1	-0.6464	0.4228	0.524	0.229	1.200	-1.529	0.126
Group2 * Session3	V600 - CTL * 4 - 1	-0.6419	0.3660	0.526	0.257	1.078	-1.754	0.079
Group1 * Session4	V400 - CTL * 5 - 1	-0.3108	0.4168	0.733	0.324	1.659	-0.746	0.456
Group2 * Session4	V600 - CTL * 5 - 1	-0.2408	0.3582	0.786	0.390	1.586	-0.672	0.501
Group1 * Session5	V400 - CTL * 6 - 1	-0.1056	0.3995	0.900	0.411	1.969	-0.264	0.791
Group2 * Session5	V600 - CTL * 6 - 1	0.0934	0.3407	1.098	0.563	2.141	0.274	0.784

Random Components

Groups	Name	SD	Variance	ICC
Rat	(Intercept)	0.0302	9.11e-4	2.77e-4
	Group1	0.4014	0.1611	
	Group2	0.2804	0.0786	
Residuals		1.0000	1.0000	.

Note. Number of Obs: 3240 , groups: Rat 27

Random Parameters correlations

Groups	Param.1	Param.2	Corr.
Rat	(Intercept)	Group1	0.339
	(Intercept)	Group2	-0.566
	Group1	Group2	-0.934

Post Hoc Tests

Post Hoc Comparisons - Group

Comparison						
Group	Group	exp(B)	SE	z	P _{bonferroni}	
CTL	- V400	1.746	0.346	2.814	0.015	
CTL	- V600	1.614	0.218	3.541	0.001	
V400	- V600	0.925	0.178	-0.407	1.000	

Post Hoc Comparisons - Session

Comparison						
Session	Session	exp(B)	SE	z	P _{bonferroni}	
1	- 2	0.675	0.0992	-2.673	0.113	
1	- 3	0.484	0.0739	-4.755	<.001	
1	- 4	0.563	0.0852	-3.797	0.002	
1	- 5	0.530	0.0793	-4.243	<.001	
1	- 6	0.705	0.1017	-2.422	0.232	
2	- 3	0.716	0.1131	-2.112	0.520	
2	- 4	0.834	0.1305	-1.160	1.000	
2	- 5	0.785	0.1216	-1.565	1.000	
2	- 6	1.045	0.1563	0.291	1.000	
3	- 4	1.164	0.1885	0.939	1.000	
3	- 5	1.095	0.1758	0.567	1.000	
3	- 6	1.458	0.2265	2.428	0.228	
4	- 5	0.941	0.1497	-0.384	1.000	
4	- 6	1.252	0.1927	1.463	1.000	
5	- 6	1.331	0.2029	1.878	0.906	

Post Hoc Comparisons - Group * Session

Comparison				exp(B)	SE	z	Pbonferroni
Group	Session	Group	Session				
CTL	1	- CTL	2	0.494	0.1536	-2.26862	1.000
CTL	1	- CTL	3	0.367	0.1199	-3.06745	0.330
CTL	1	- CTL	4	0.367	0.1199	-3.06765	0.330
CTL	1	- CTL	5	0.441	0.1396	-2.58581	1.000
CTL	1	- CTL	6	0.702	0.2093	-1.18518	1.000
CTL	1	- V400	1	1.272	0.4033	0.75970	1.000
CTL	1	- V400	2	0.993	0.3171	-0.02113	1.000
CTL	1	- V400	3	0.680	0.2214	-1.18455	1.000
CTL	1	- V400	4	0.890	0.2854	-0.36303	1.000
CTL	1	- V400	5	0.765	0.2473	-0.82787	1.000
CTL	1	- V400	6	0.993	0.3170	-0.02114	1.000
CTL	1	- V600	1	1.211	0.3006	0.77028	1.000
CTL	1	- V600	2	0.967	0.2412	-0.13344	1.000
CTL	1	- V600	3	0.700	0.1763	-1.41747	1.000
CTL	1	- V600	4	0.843	0.2111	-0.68088	1.000
CTL	1	- V600	5	0.679	0.1714	-1.53380	1.000
CTL	1	- V600	6	0.775	0.1945	-1.01690	1.000
CTL	2	- CTL	3	0.743	0.2571	-0.85945	1.000
CTL	2	- CTL	4	0.743	0.2571	-0.85952	1.000
CTL	2	- CTL	5	0.893	0.3004	-0.33617	1.000
CTL	2	- CTL	6	1.423	0.4537	1.10696	1.000
CTL	2	- V400	2	2.012	0.6816	2.06486	1.000
CTL	2	- V400	3	1.378	0.4750	0.92896	1.000
CTL	2	- V400	4	1.803	0.6133	1.73395	1.000
CTL	2	- V400	5	1.550	0.5310	1.28040	1.000
CTL	2	- V400	6	2.012	0.6816	2.06472	1.000
CTL	2	- V600	2	1.960	0.5368	2.45626	1.000
CTL	2	- V600	3	1.417	0.3917	1.26191	1.000
CTL	2	- V600	4	1.709	0.4695	1.94915	1.000
CTL	2	- V600	5	1.376	0.3807	1.15272	1.000
CTL	2	- V600	6	1.570	0.4324	1.63641	1.000
CTL	3	- CTL	4	1.000	0.3606	1.48e-5	1.000
CTL	3	- CTL	5	1.203	0.4223	0.52531	1.000
CTL	3	- CTL	6	1.916	0.6408	1.94535	1.000
CTL	3	- V400	3	1.855	0.6665	1.71976	1.000
CTL	3	- V400	4	2.428	0.8614	2.50118	1.000
CTL	3	- V400	5	2.088	0.7454	2.06156	1.000
CTL	3	- V400	6	2.710	0.9577	2.82069	0.733
CTL	3	- V600	3	1.909	0.5616	2.19658	1.000
CTL	3	- V600	4	2.301	0.6735	2.84604	0.677
CTL	3	- V600	5	1.852	0.5456	2.09319	1.000
CTL	3	- V600	6	2.113	0.6201	2.55075	1.000
CTL	4	- CTL	5	1.203	0.4223	0.52528	1.000
CTL	4	- CTL	6	1.916	0.6408	1.94529	1.000
CTL	4	- V400	4	2.428	0.8614	2.50119	1.000
CTL	4	- V400	5	2.088	0.7454	2.06154	1.000
CTL	4	- V400	6	2.710	0.9577	2.82061	0.733
CTL	4	- V600	4	2.301	0.6735	2.84603	0.677
CTL	4	- V600	5	1.852	0.5456	2.09314	1.000
CTL	4	- V600	6	2.113	0.6201	2.55074	1.000
CTL	5	- CTL	6	1.594	0.5166	1.43731	1.000
CTL	5	- V400	5	1.736	0.6033	1.58723	1.000
CTL	5	- V400	6	2.253	0.7747	2.36304	1.000

Post Hoc Comparisons - Group * Session

Comparison				exp(B)	SE	z	Pbonferroni
Group	Session	Group	Session				
CTL	5	- V600	5	1.540	0.4358	1.52709	1.000
CTL	5	- V600	6	1.757	0.4951	2.00151	1.000
CTL	6	- V400	6	1.414	0.4617	1.06105	1.000
CTL	6	- V600	6	1.103	0.2872	0.37601	1.000
V400	1	- CTL	2	0.388	0.1306	-2.81220	0.753
V400	1	- CTL	3	0.288	0.1013	-3.54039	0.061
V400	1	- CTL	4	0.288	0.1013	-3.53992	0.061
V400	1	- CTL	5	0.346	0.1184	-3.10064	0.295
V400	1	- CTL	6	0.552	0.1791	-1.83070	1.000
V400	1	- V400	2	0.781	0.2078	-0.93017	1.000
V400	1	- V400	3	0.534	0.1464	-2.28804	1.000
V400	1	- V400	4	0.700	0.1874	-1.33355	1.000
V400	1	- V400	5	0.601	0.1630	-1.87644	1.000
V400	1	- V400	6	0.781	0.2078	-0.93020	1.000
V400	1	- V600	1	0.952	0.2627	-0.17956	1.000
V400	1	- V600	2	0.760	0.2106	-0.98950	1.000
V400	1	- V600	3	0.550	0.1537	-2.14035	1.000
V400	1	- V600	4	0.663	0.1842	-1.48007	1.000
V400	1	- V600	5	0.534	0.1493	-2.24477	1.000
V400	1	- V600	6	0.609	0.1696	-1.78118	1.000
V400	2	- CTL	3	0.369	0.1304	-2.82069	0.733
V400	2	- CTL	4	0.369	0.1304	-2.82059	0.733
V400	2	- CTL	5	0.444	0.1526	-2.36303	1.000
V400	2	- CTL	6	0.707	0.2309	-1.06099	1.000
V400	2	- V400	3	0.685	0.1890	-1.37243	1.000
V400	2	- V400	4	0.896	0.2422	-0.40567	1.000
V400	2	- V400	5	0.770	0.2105	-0.95434	1.000
V400	2	- V400	6	1.000	0.2686	-1.08e-5	1.000
V400	2	- V600	2	0.974	0.2721	-0.09495	1.000
V400	2	- V600	3	0.704	0.1985	-1.24376	1.000
V400	2	- V600	4	0.849	0.2380	-0.58404	1.000
V400	2	- V600	5	0.684	0.1929	-1.34820	1.000
V400	2	- V600	6	0.780	0.2191	-0.88470	1.000
V400	3	- CTL	4	0.539	0.1937	-1.71975	1.000
V400	3	- CTL	5	0.648	0.2268	-1.23889	1.000
V400	3	- CTL	6	1.033	0.3439	0.09781	1.000
V400	3	- V400	4	1.309	0.3637	0.96968	1.000
V400	3	- V400	5	1.125	0.3159	0.42119	1.000
V400	3	- V400	6	1.461	0.4034	1.37241	1.000
V400	3	- V600	3	1.029	0.2975	0.09841	1.000
V400	3	- V600	4	1.240	0.3568	0.74852	1.000
V400	3	- V600	5	0.999	0.2891	-0.00474	1.000
V400	3	- V600	6	1.139	0.3285	0.45255	1.000
V400	4	- CTL	5	0.495	0.1709	-2.03611	1.000
V400	4	- CTL	6	0.789	0.2588	-0.72204	1.000
V400	4	- V400	5	0.860	0.2364	-0.54981	1.000
V400	4	- V400	6	1.116	0.3016	0.40566	1.000
V400	4	- V600	4	0.947	0.2671	-0.19171	1.000
V400	4	- V600	5	0.763	0.2165	-0.95402	1.000
V400	4	- V600	6	0.870	0.2459	-0.49152	1.000
V400	5	- CTL	6	0.918	0.3034	-0.25916	1.000
V400	5	- V400	6	1.298	0.3547	0.95434	1.000
V400	5	- V600	5	0.887	0.2544	-0.41712	1.000

Post Hoc Comparisons - Group * Session

Comparison				exp(B)	SE	z	Pbonferroni
Group	Session	Group	Session				
V400	5	- V600	6	1.012	0.2890	0.04294	1.000
V400	6	- V600	6	0.780	0.2191	-0.88470	1.000
V600	1	- CTL	2	0.408	0.1113	-3.28693	0.155
V600	1	- CTL	3	0.303	0.0881	-4.10532	0.006
V600	1	- CTL	4	0.303	0.0881	-4.10530	0.006
V600	1	- CTL	5	0.364	0.1017	-3.61766	0.045
V600	1	- CTL	6	0.580	0.1495	-2.11238	1.000
V600	1	- V400	2	0.820	0.2285	-0.71093	1.000
V600	1	- V400	3	0.562	0.1606	-2.01819	1.000
V600	1	- V400	4	0.735	0.2060	-1.09808	1.000
V600	1	- V400	5	0.632	0.1789	-1.62068	1.000
V600	1	- V400	6	0.820	0.2285	-0.71094	1.000
V600	1	- V600	2	0.799	0.1299	-1.38044	1.000
V600	1	- V600	3	0.578	0.0963	-3.28971	0.153
V600	1	- V600	4	0.696	0.1143	-2.20398	1.000
V600	1	- V600	5	0.561	0.0938	-3.45837	0.083
V600	1	- V600	6	0.640	0.1057	-2.70275	1.000
V600	2	- CTL	3	0.379	0.1106	-3.32395	0.136
V600	2	- CTL	4	0.379	0.1106	-3.32386	0.136
V600	2	- CTL	5	0.456	0.1277	-2.80460	0.771
V600	2	- CTL	6	0.726	0.1879	-1.23644	1.000
V600	2	- V400	3	0.703	0.2016	-1.22895	1.000
V600	2	- V400	4	0.920	0.2587	-0.29570	1.000
V600	2	- V400	5	0.791	0.2247	-0.82490	1.000
V600	2	- V400	6	1.027	0.2869	0.09494	1.000
V600	2	- V600	3	0.723	0.1217	-1.92604	1.000
V600	2	- V600	4	0.872	0.1444	-0.82814	1.000
V600	2	- V600	5	0.702	0.1184	-2.09730	1.000
V600	2	- V600	6	0.801	0.1335	-1.33167	1.000
V600	3	- CTL	4	0.524	0.1542	-2.19653	1.000
V600	3	- CTL	5	0.630	0.1781	-1.63417	1.000
V600	3	- CTL	6	1.004	0.2624	0.01570	1.000
V600	3	- V400	4	1.272	0.3607	0.84977	1.000
V600	3	- V400	5	1.094	0.3133	0.31339	1.000
V600	3	- V400	6	1.420	0.4002	1.24378	1.000
V600	3	- V600	4	1.205	0.2045	1.10158	1.000
V600	3	- V600	5	0.971	0.1675	-0.17281	1.000
V600	3	- V600	6	1.107	0.1890	0.59766	1.000
V600	4	- CTL	5	0.523	0.1469	-2.30801	1.000
V600	4	- CTL	6	0.833	0.2163	-0.70379	1.000
V600	4	- V400	5	0.907	0.2585	-0.34090	1.000
V600	4	- V400	6	1.178	0.3301	0.58404	1.000
V600	4	- V600	5	0.805	0.1370	-1.27383	1.000
V600	4	- V600	6	0.919	0.1545	-0.50466	1.000
V600	5	- CTL	6	1.035	0.2707	0.12968	1.000
V600	5	- V400	6	1.463	0.4127	1.34820	1.000
V600	5	- V600	6	1.141	0.1953	0.77028	1.000

Estimated Marginal Means

Group

Group	Prob.	SE	df	95% Confidence Interval	
				Lower	Upper
CTL	0.749	0.0190	Inf	0.710	0.785
V400	0.631	0.0396	Inf	0.551	0.705
V600	0.649	0.0205	Inf	0.608	0.688

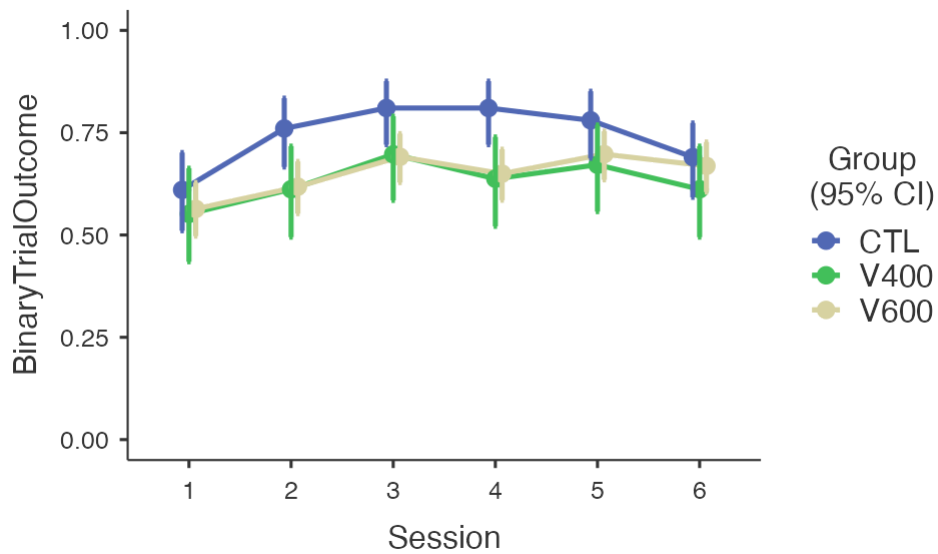
Session

Session	Prob.	SE	df	95% Confidence Interval	
				Lower	Upper
1	0.575	0.0281	Inf	0.520	0.629
2	0.667	0.0271	Inf	0.612	0.718
3	0.737	0.0250	Inf	0.685	0.783
4	0.706	0.0264	Inf	0.652	0.755
5	0.719	0.0253	Inf	0.667	0.766
6	0.658	0.0267	Inf	0.604	0.708

Group:Session

Group	Session	Prob.	SE	df	95% Confidence Interval	
					Lower	Upper
CTL	1	0.610	0.0493	Inf	0.510	0.701
V400	1	0.552	0.0593	Inf	0.435	0.663
V600	1	0.564	0.0336	Inf	0.497	0.628
CTL	2	0.760	0.0431	Inf	0.666	0.834
V400	2	0.612	0.0576	Inf	0.495	0.717
V600	2	0.618	0.0327	Inf	0.552	0.680
CTL	3	0.810	0.0395	Inf	0.721	0.876
V400	3	0.697	0.0530	Inf	0.585	0.790
V600	3	0.691	0.0306	Inf	0.628	0.748
CTL	4	0.810	0.0395	Inf	0.721	0.876
V400	4	0.637	0.0565	Inf	0.521	0.740
V600	4	0.650	0.0319	Inf	0.585	0.710
CTL	5	0.780	0.0418	Inf	0.688	0.851
V400	5	0.672	0.0547	Inf	0.557	0.769
V600	5	0.697	0.0304	Inf	0.635	0.753
CTL	6	0.690	0.0467	Inf	0.592	0.774
V400	6	0.612	0.0576	Inf	0.495	0.717
V600	6	0.669	0.0314	Inf	0.605	0.727

Effects Plots



References

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Table 3 Comparing BiasLR among CTL, V400 and V600 groups

Generalized Linear Model

Model Info

Info	Value	Comment
Model Type	Linear	Classical Regression/ANOVA
Call	glm	biasLR ~ 1 + ratGroup + session + ratGroup:session
Link function	Identity	Coefficients in the same scale of y
Distribution	Gaussian	Normal distribution of residual
R-squared	0.1849	Proportion of reduction of error
AIC	-190.0250	Less is better
BIC	-131.3610	Less is better
Deviance	2.3214	Less is better
Residual DF	144	
Chi-squared/DF	0.0161	Overdispersion indicator
Converged	yes	Whether the estimation found a solution

[3]

Model Results

Loglikelihood ratio tests

	X ²	df	p
ratGroup	13.63	2	0.001
session	8.55	5	0.128
ratGroup * session	10.67	10	0.384

Parameter Estimates

Names	Effect	Estimate	SE	exp(B)	95% Exp(B) Confidence Interval		z	p
					Lower	Upper		
(Intercept)	(Intercept)	0.1677	0.0113	1.183	1.157	1.209	14.814	<.001
ratGroup1	V400 - CTL	0.1058	0.0314	1.112	1.045	1.182	3.372	<.001
ratGroup2	V600 - CTL	0.0272	0.0266	1.028	0.975	1.082	1.024	0.308
session1	2 - 1	-0.0708	0.0392	0.932	0.863	1.006	-1.805	0.073
session2	3 - 1	-0.0932	0.0392	0.911	0.844	0.984	-2.377	0.019
session3	4 - 1	-0.0726	0.0392	0.930	0.861	1.004	-1.851	0.066
session4	5 - 1	-0.1022	0.0392	0.903	0.836	0.975	-2.607	0.010
session5	6 - 1	-0.0560	0.0392	0.945	0.876	1.021	-1.429	0.155
ratGroup1 * session1	V400 - CTL * 2 - 1	0.2883	0.1087	1.334	1.078	1.651	2.652	0.009
ratGroup2 * session1	V600 - CTL * 2 - 1	0.1894	0.0920	1.208	1.009	1.447	2.059	0.041
ratGroup1 * session2	V400 - CTL * 3 - 1	0.2317	0.1087	1.261	1.019	1.560	2.131	0.035
ratGroup2 * session2	V600 - CTL * 3 - 1	0.2087	0.0920	1.232	1.029	1.476	2.269	0.025
ratGroup1 * session3	V400 - CTL * 4 - 1	0.2167	0.1087	1.242	1.004	1.537	1.993	0.048
ratGroup2 * session3	V600 - CTL * 4 - 1	0.1656	0.0920	1.180	0.985	1.413	1.800	0.074
ratGroup1 * session4	V400 - CTL * 5 - 1	0.1733	0.1087	1.189	0.961	1.472	1.594	0.113
ratGroup2 * session4	V600 - CTL * 5 - 1	0.0900	0.0920	1.094	0.914	1.310	0.978	0.330
ratGroup1 * session5	V400 - CTL * 6 - 1	0.1650	0.1087	1.179	0.953	1.460	1.518	0.131
ratGroup2 * session5	V600 - CTL * 6 - 1	0.0869	0.0920	1.091	0.911	1.306	0.944	0.347

Estimated Marginal Means

ratGroup				
ratGroup	Mean	SE	95% Confidence Interval	
			Lower	Upper
CTL	0.123	0.0232	0.0775	0.169
V400	0.229	0.0212	0.1873	0.271
V600	0.151	0.0130	0.1249	0.176

Note. Estimated means are estimated averaging across interacting variables

session

session	Mean	SE	95% Confidence Interval	
			Lower	Upper
1	0.233	0.0277	0.1787	0.288
2	0.163	0.0277	0.1079	0.218
3	0.140	0.0277	0.0855	0.195
4	0.161	0.0277	0.1061	0.216
5	0.131	0.0277	0.0764	0.186
6	0.177	0.0277	0.1226	0.232

Note. Estimated means are estimated averaging across interacting variables

ratGroup:session

ratGroup	session	Mean	SE	95% Confidence Interval	
				Lower	Upper
CTL	1	0.2900	0.0568	0.1778	0.402
V400	1	0.2167	0.0518	0.1142	0.319
V600	1	0.1938	0.0317	0.1310	0.256
CTL	2	0.0600	0.0568	-0.0522	0.172
V400	2	0.2750	0.0518	0.1725	0.377
V600	2	0.1531	0.0317	0.0904	0.216
CTL	3	0.0500	0.0568	-0.0622	0.162
V400	3	0.2083	0.0518	0.1059	0.311
V600	3	0.1625	0.0317	0.0998	0.225
CTL	4	0.0900	0.0568	-0.0222	0.202
V400	4	0.2333	0.0518	0.1309	0.336
V600	4	0.1594	0.0317	0.0966	0.222
CTL	5	0.1000	0.0568	-0.0122	0.212
V400	5	0.2000	0.0518	0.0975	0.302
V600	5	0.0937	0.0317	0.0310	0.156
CTL	6	0.1500	0.0568	0.0378	0.262
V400	6	0.2417	0.0518	0.1392	0.344
V600	6	0.1406	0.0317	0.0779	0.203

Plots

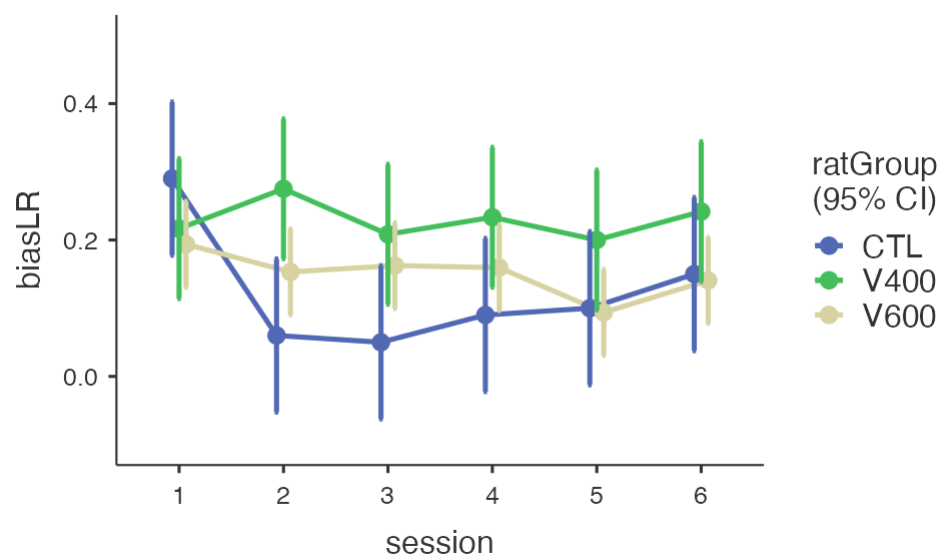
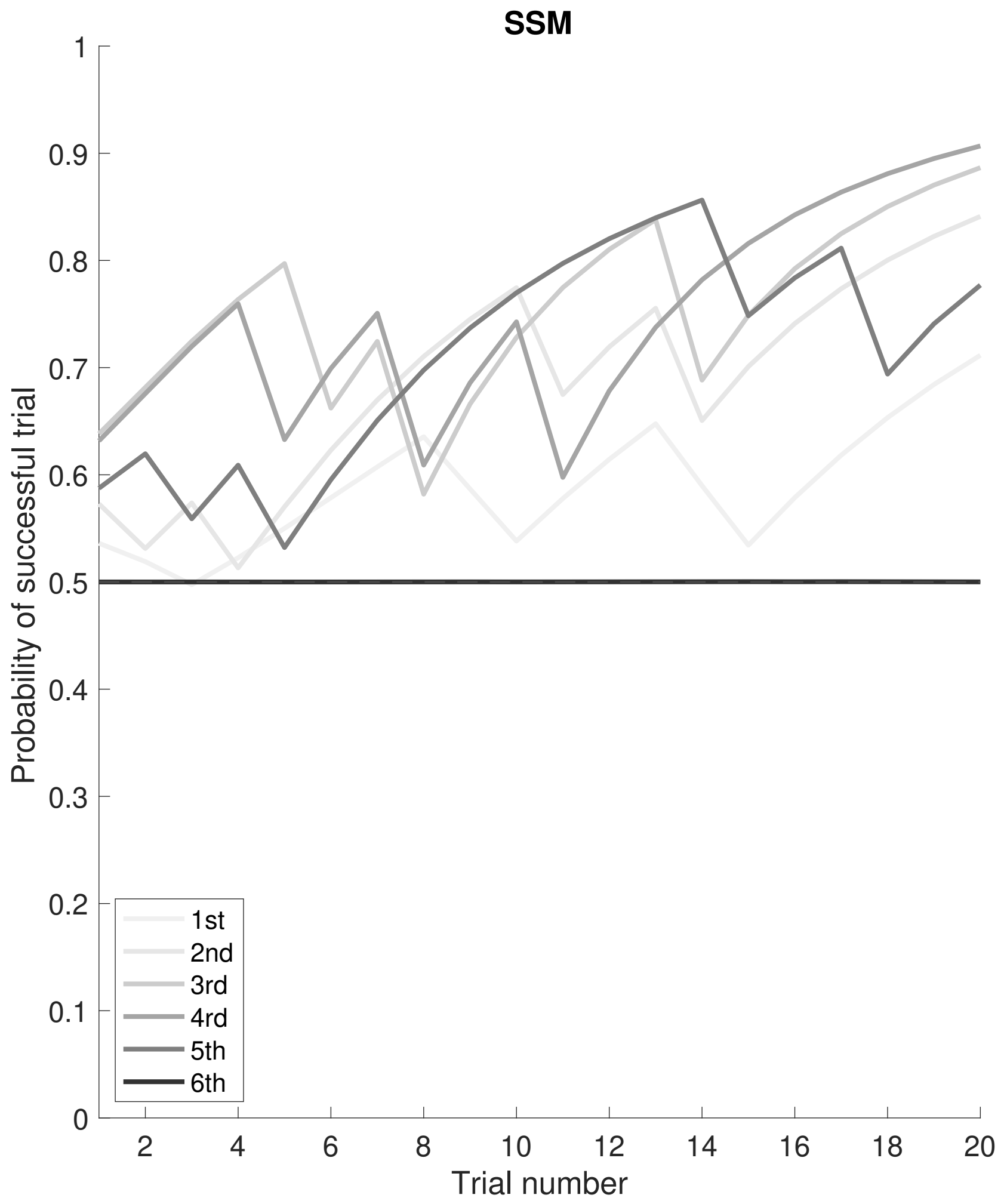
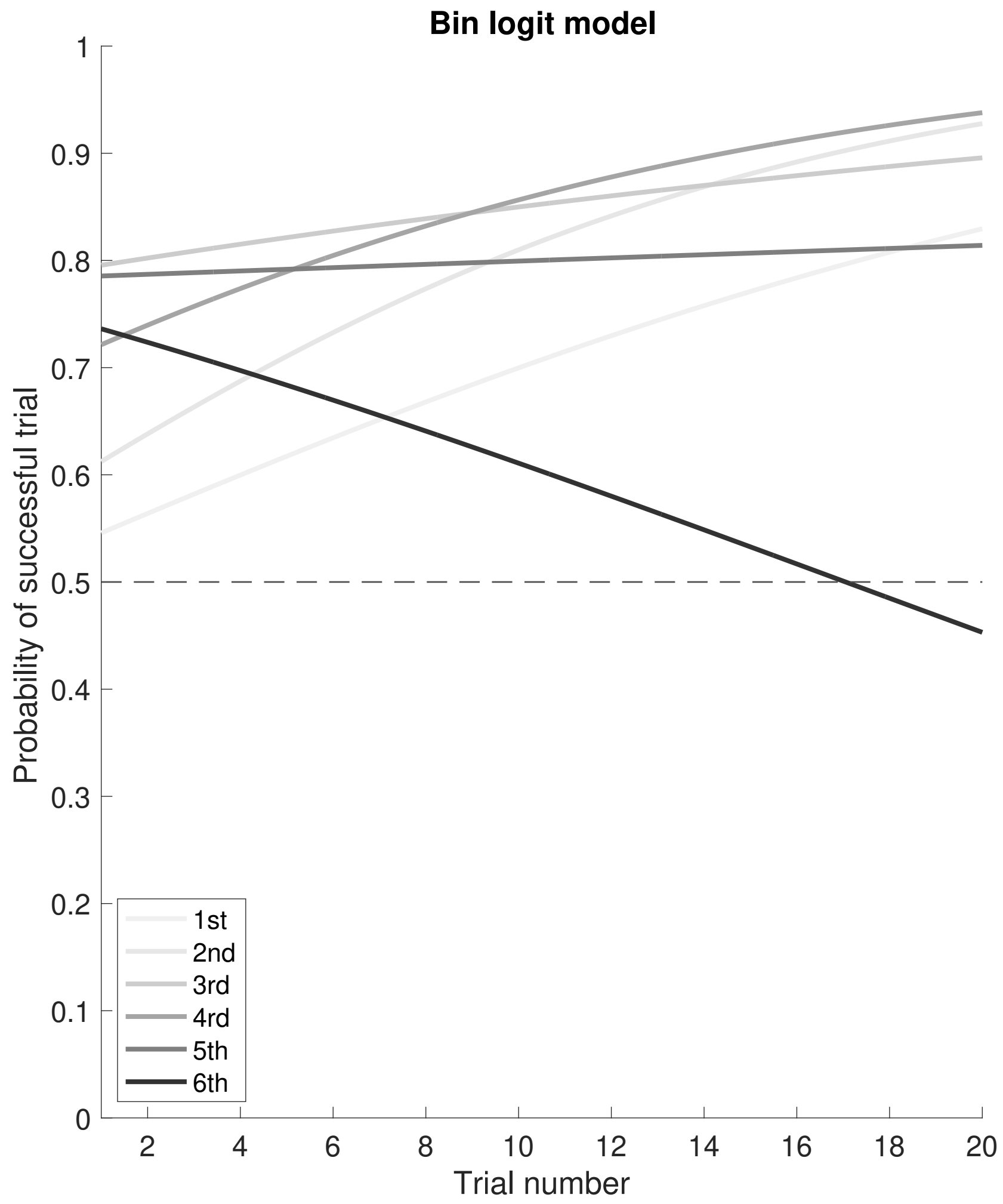
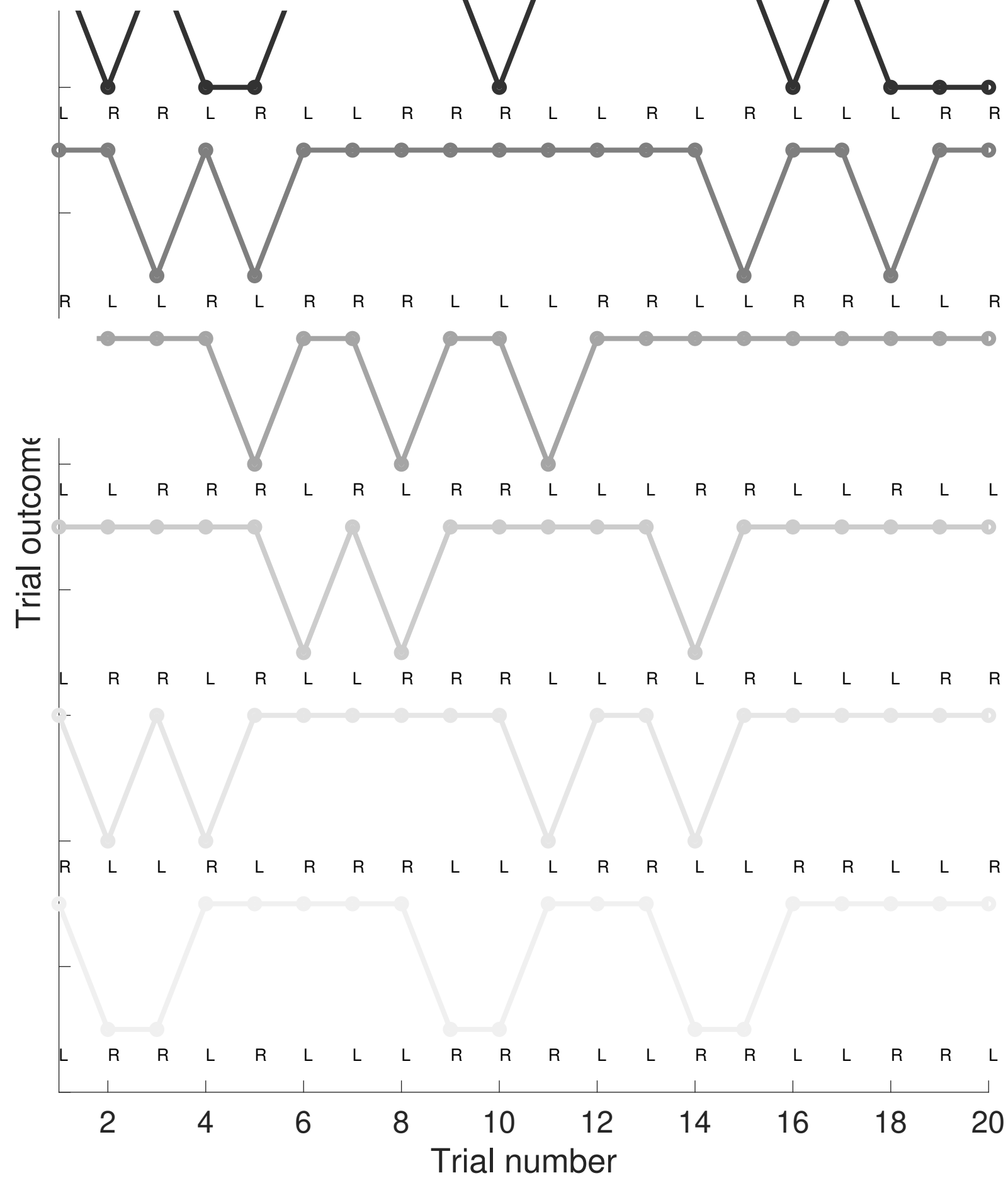
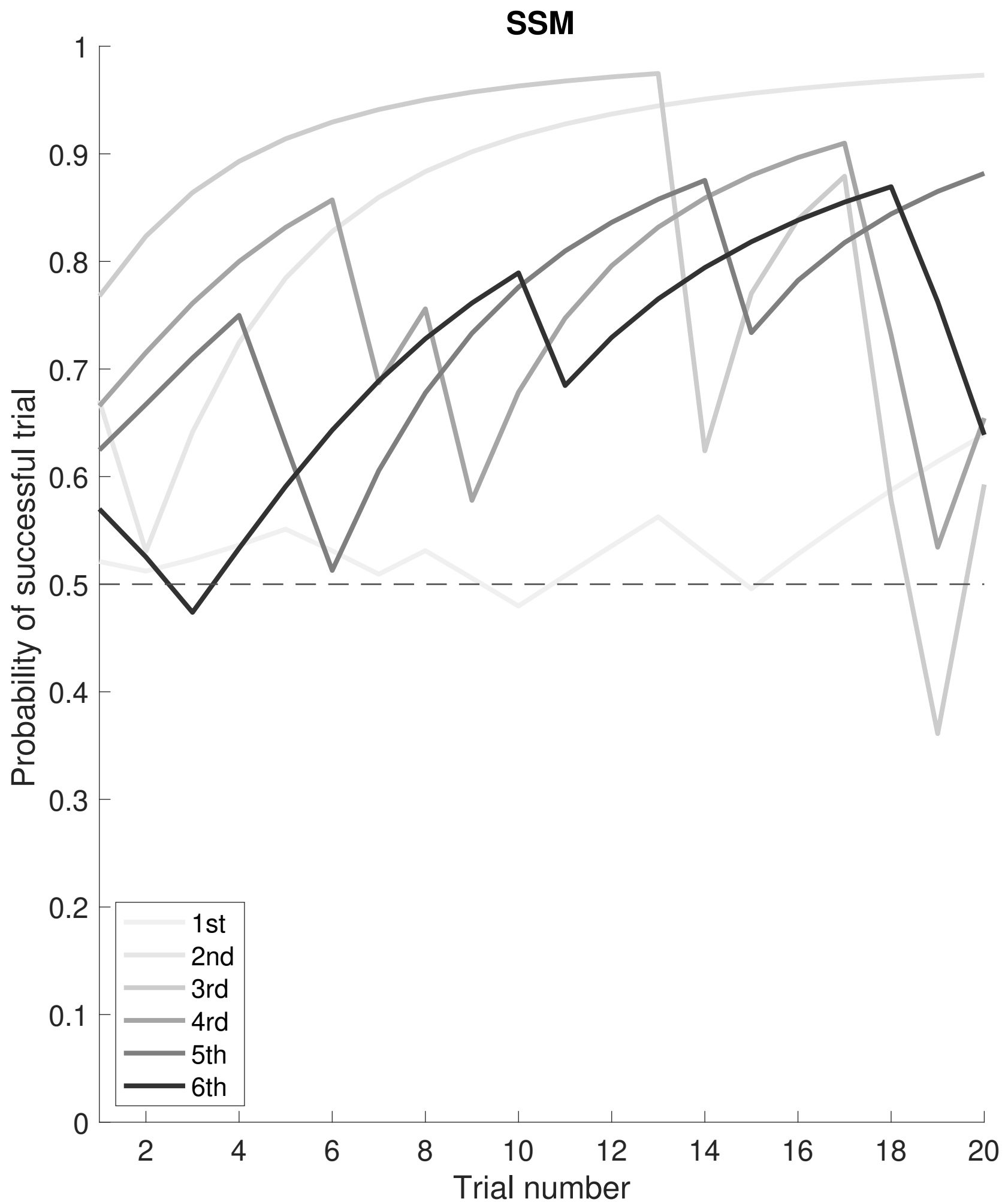
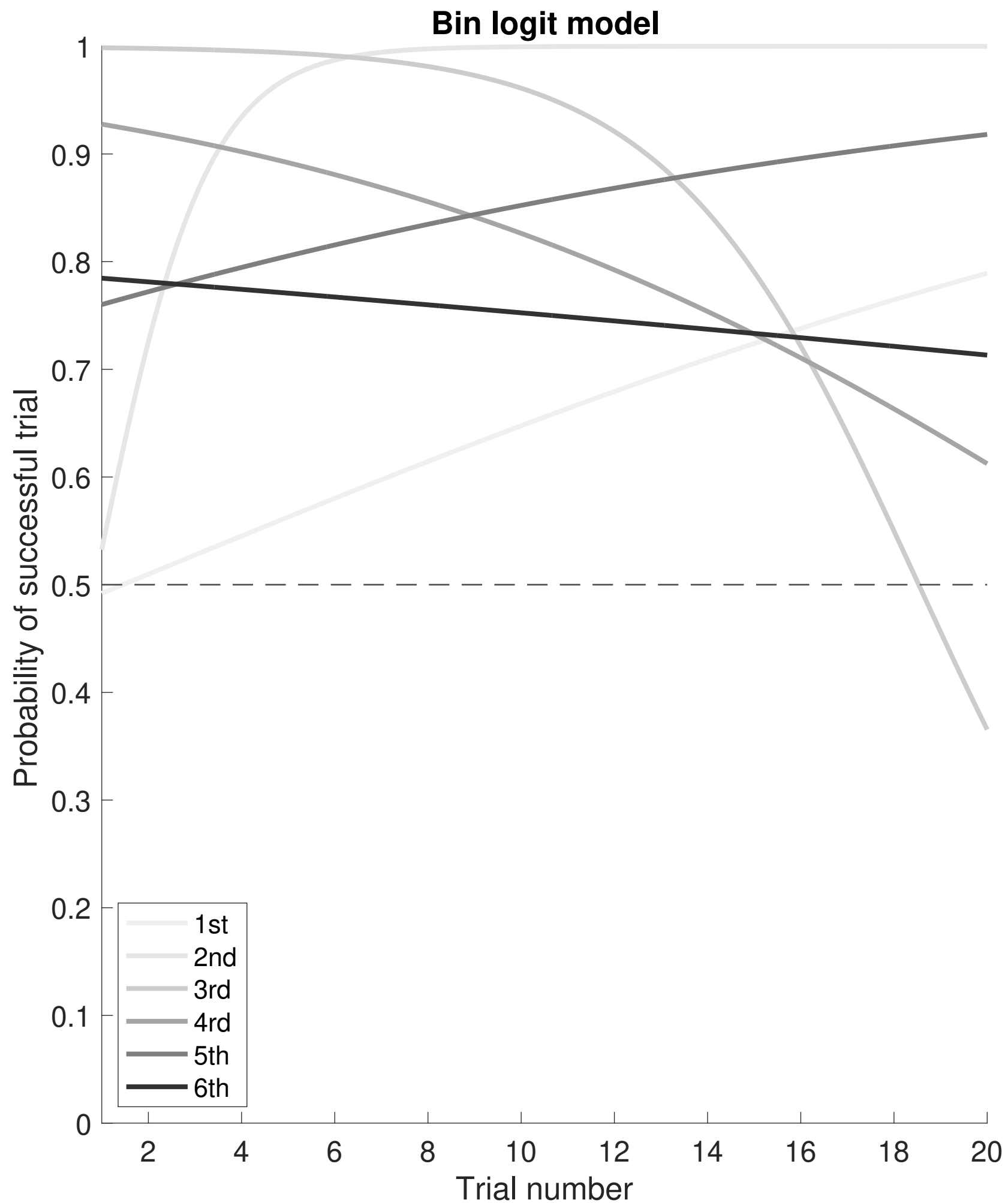
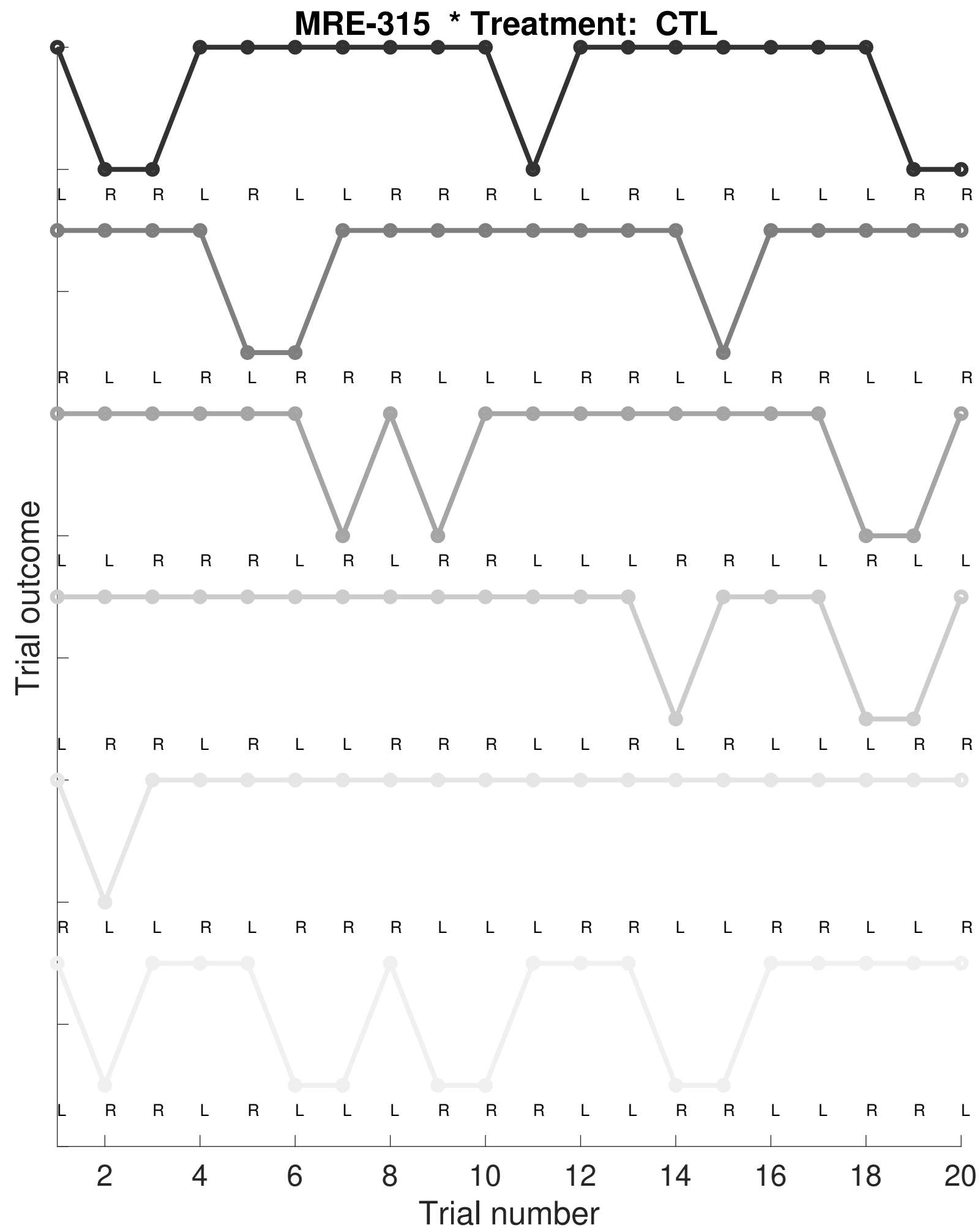


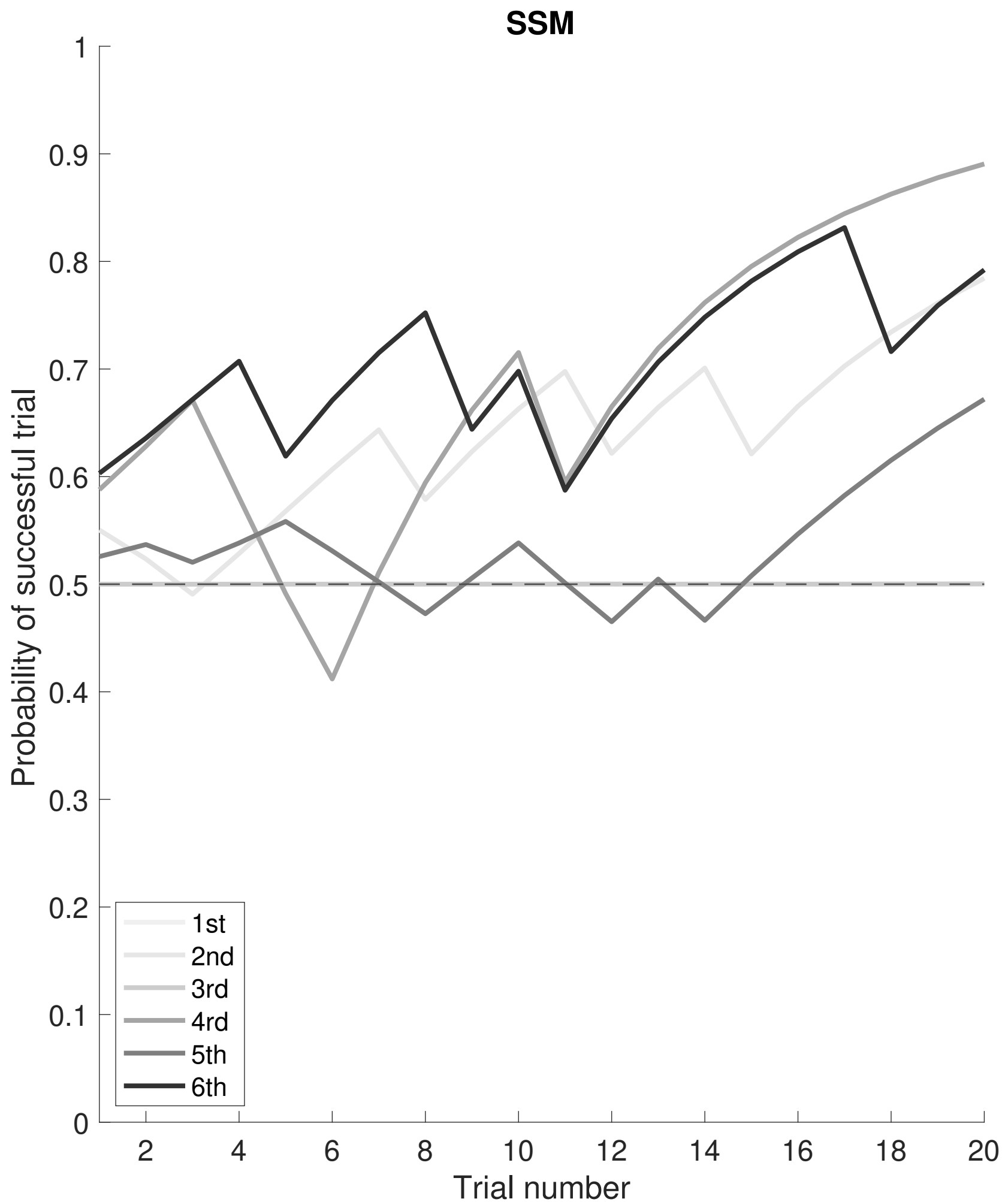
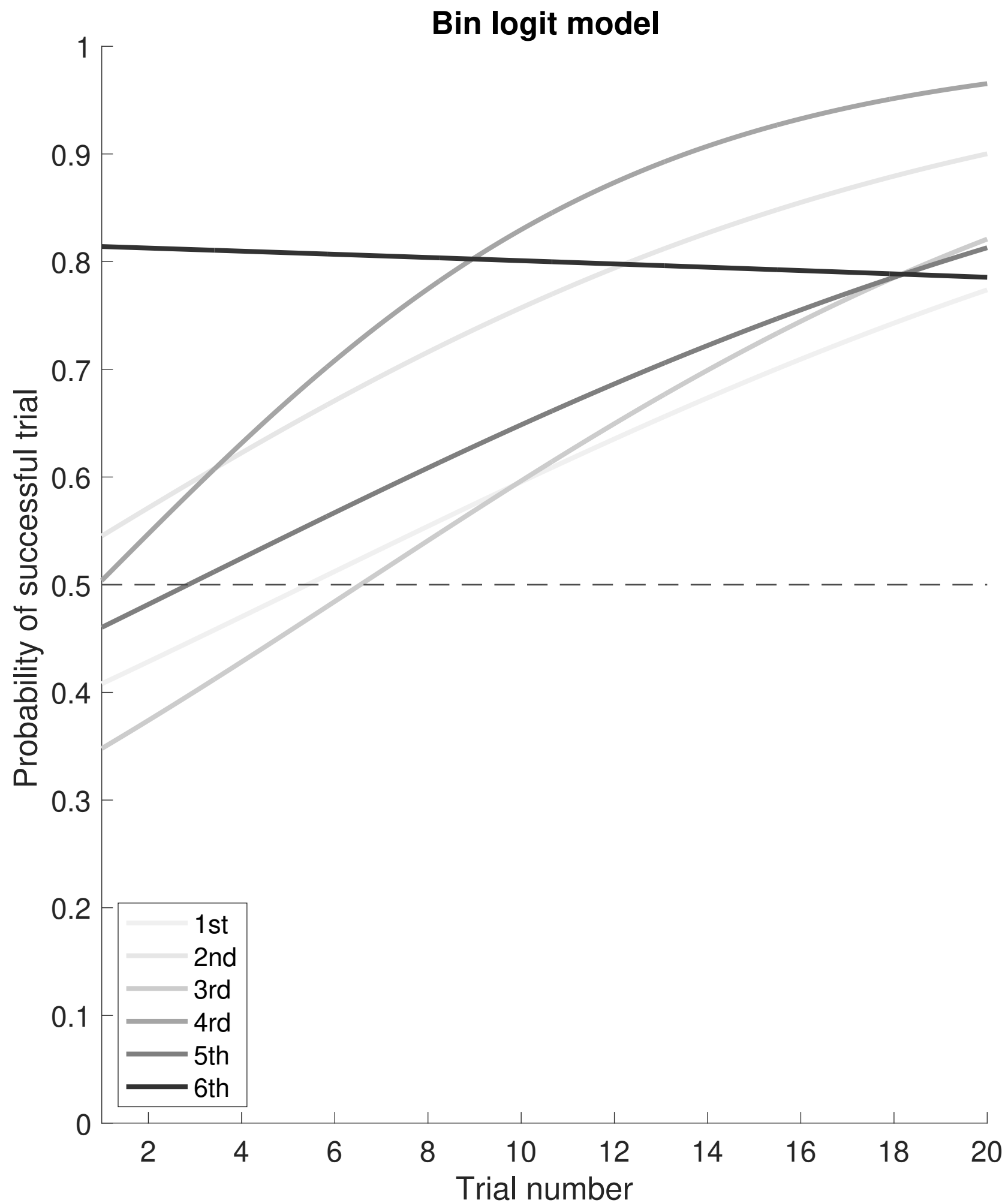
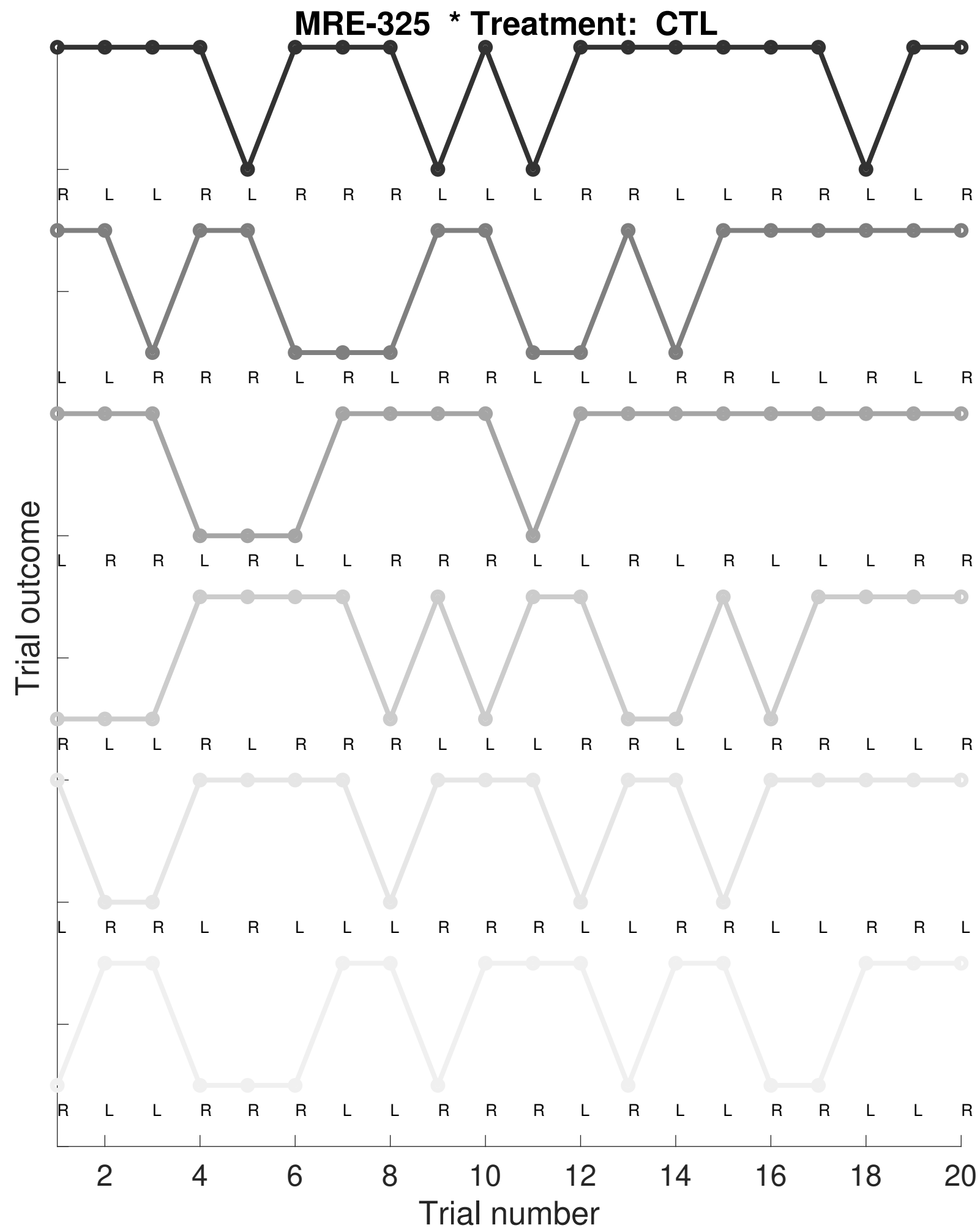
Figure S1

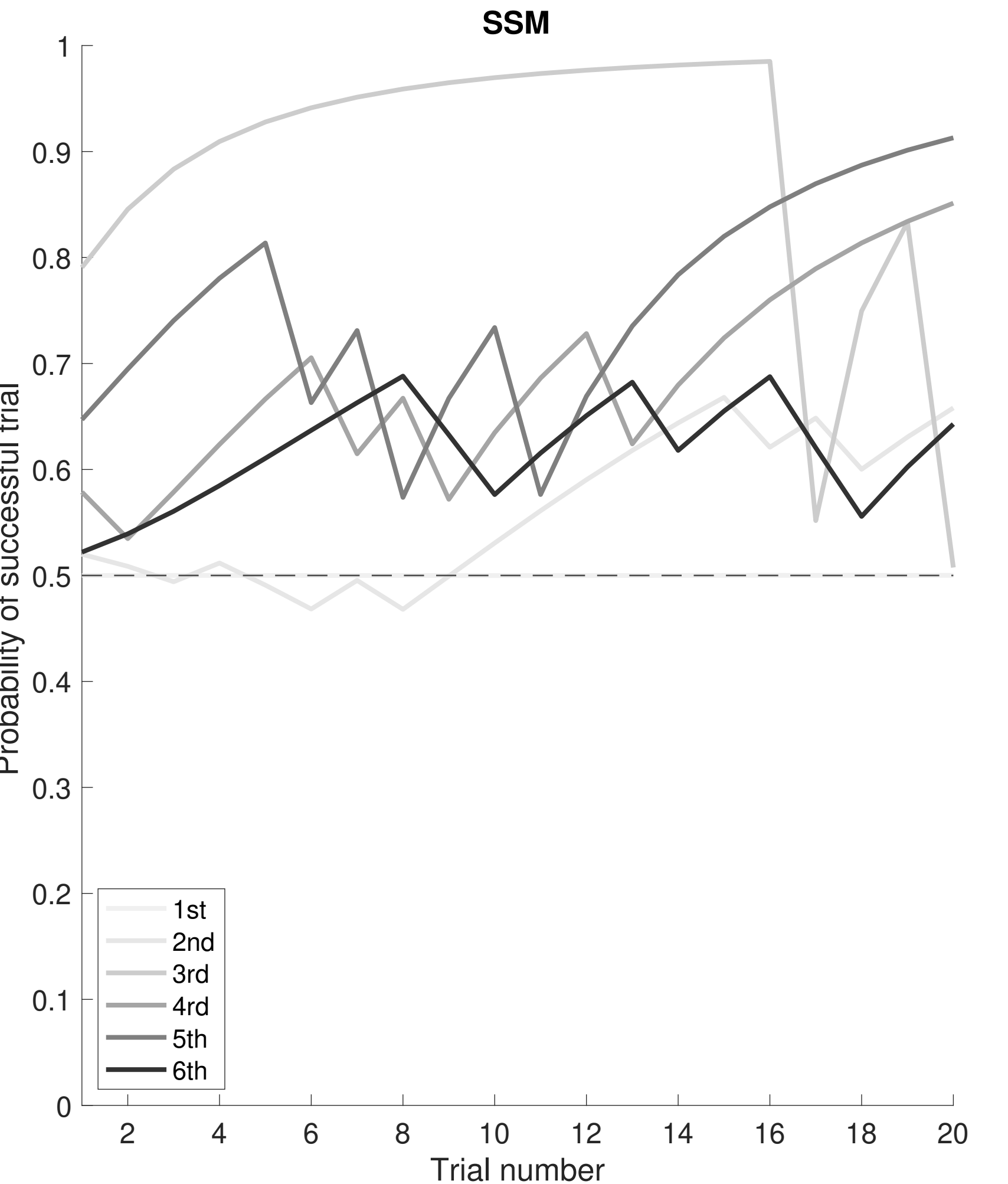
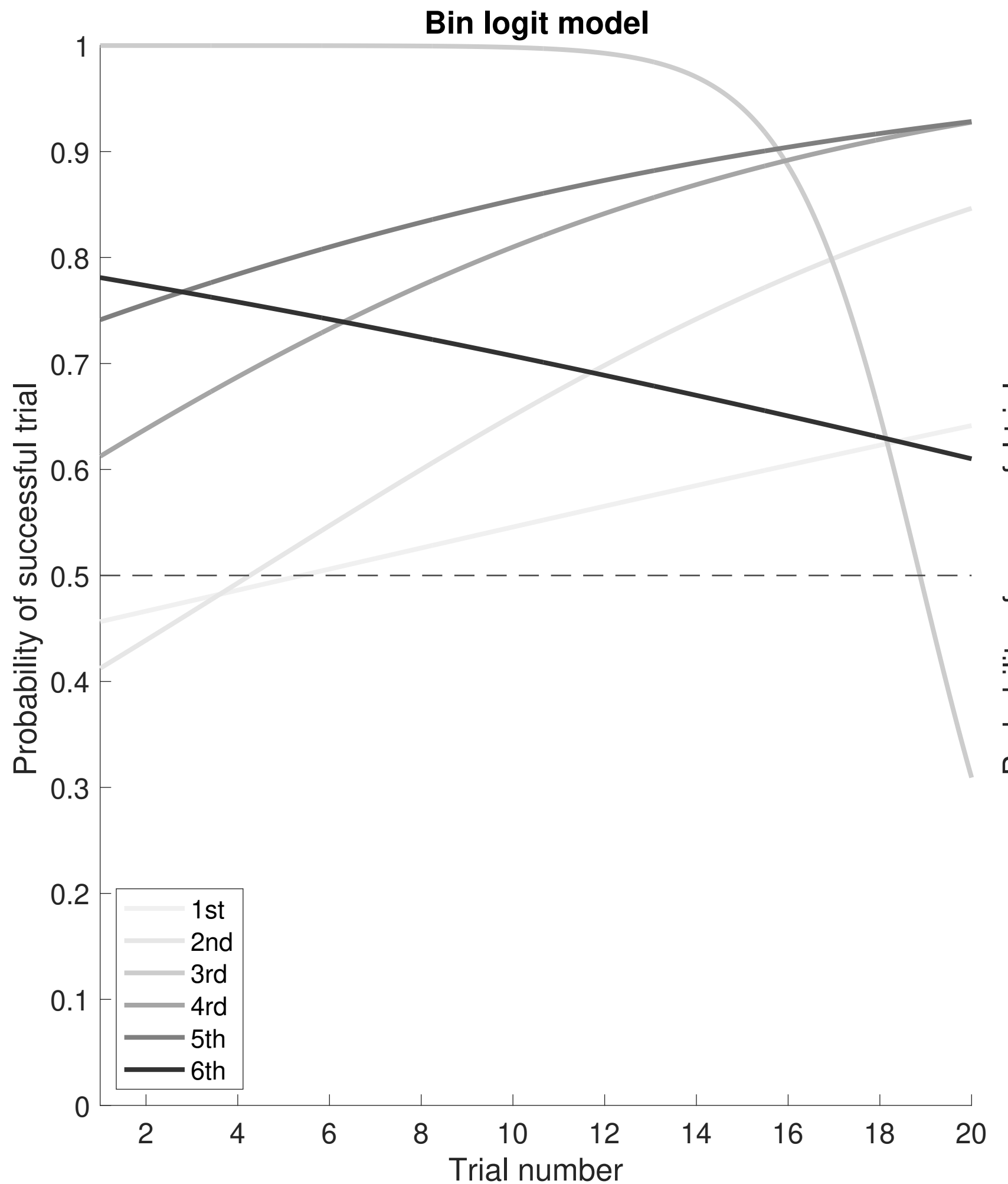
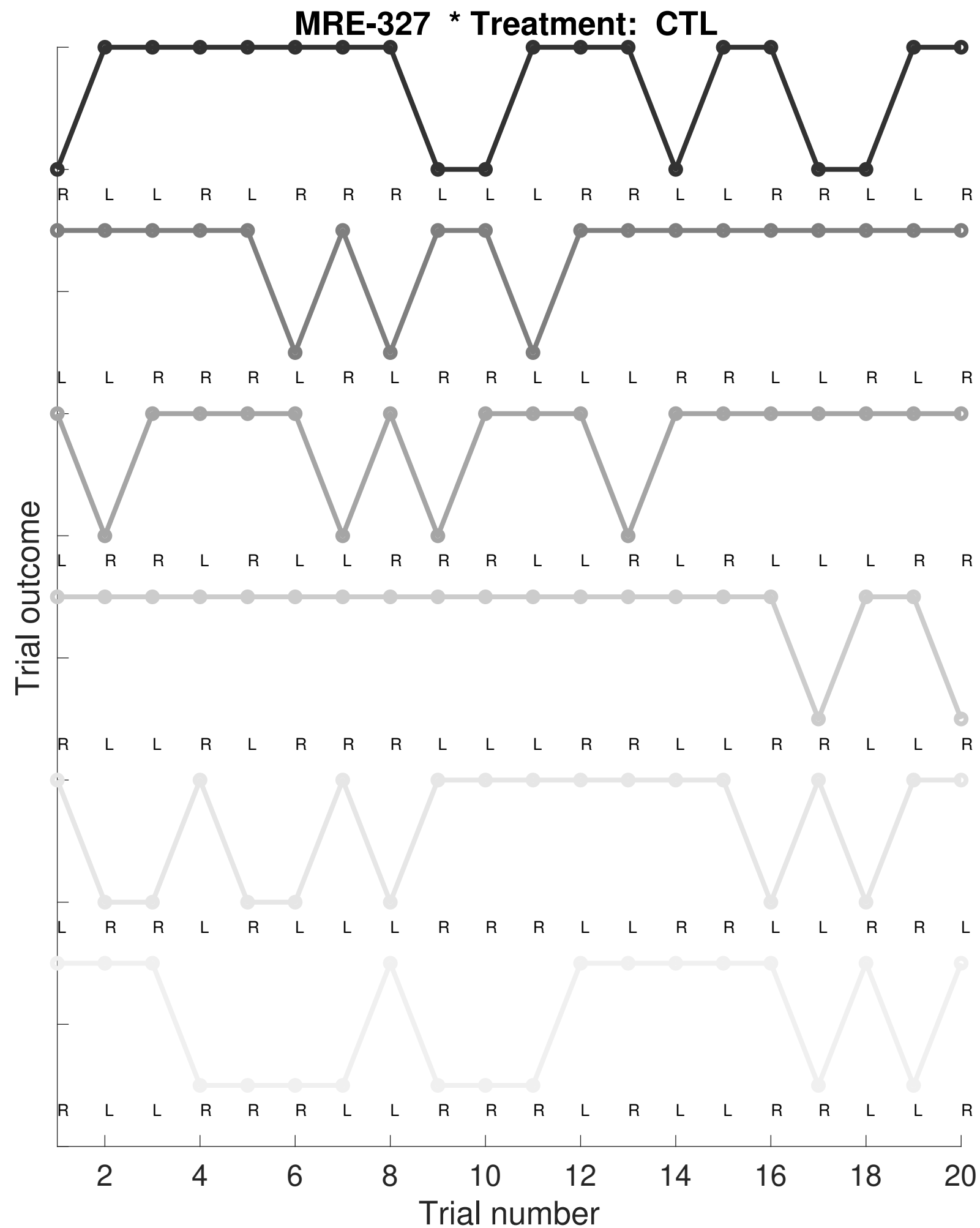
Raw behavioral data for each individual animal in each experimental group.

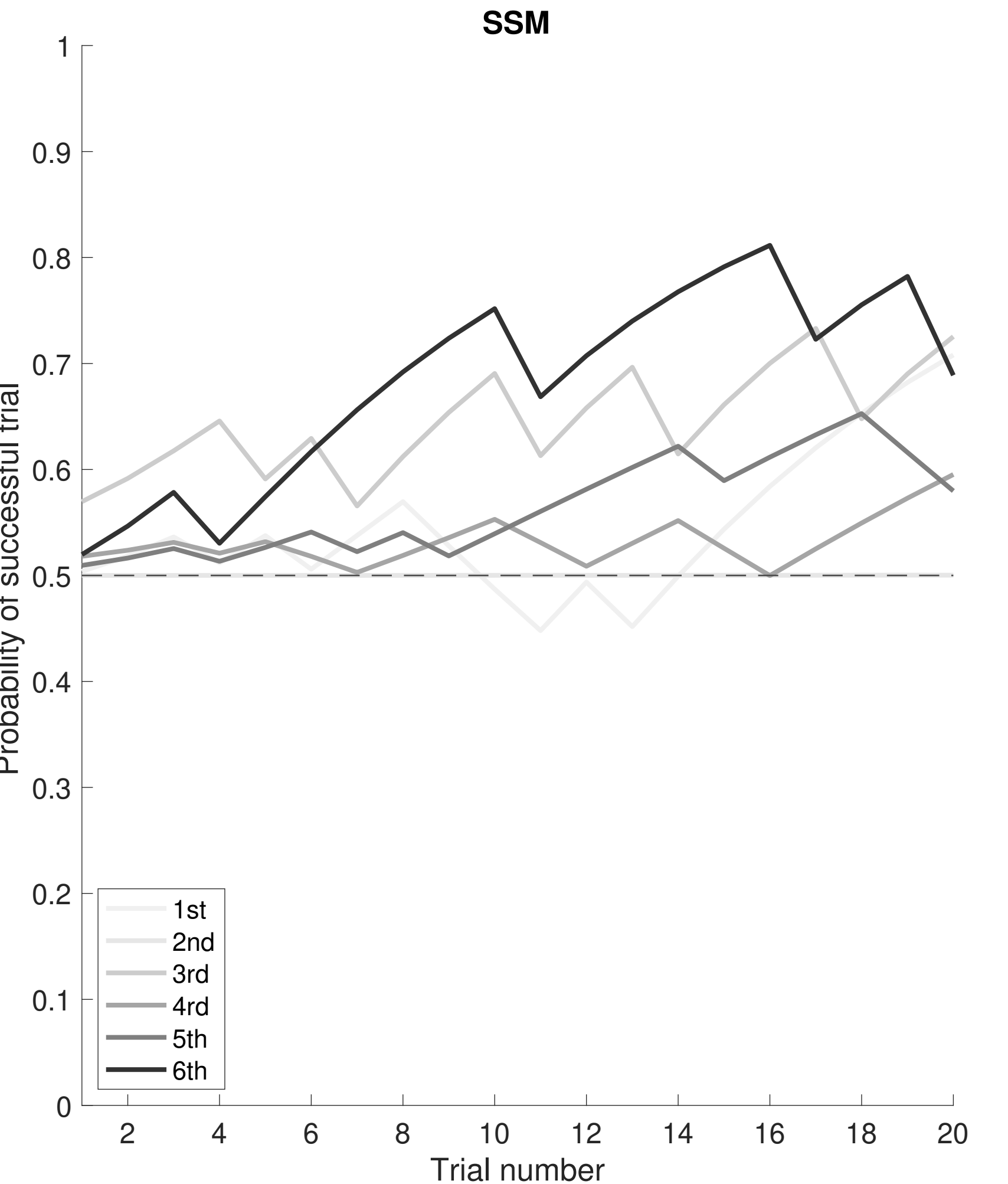
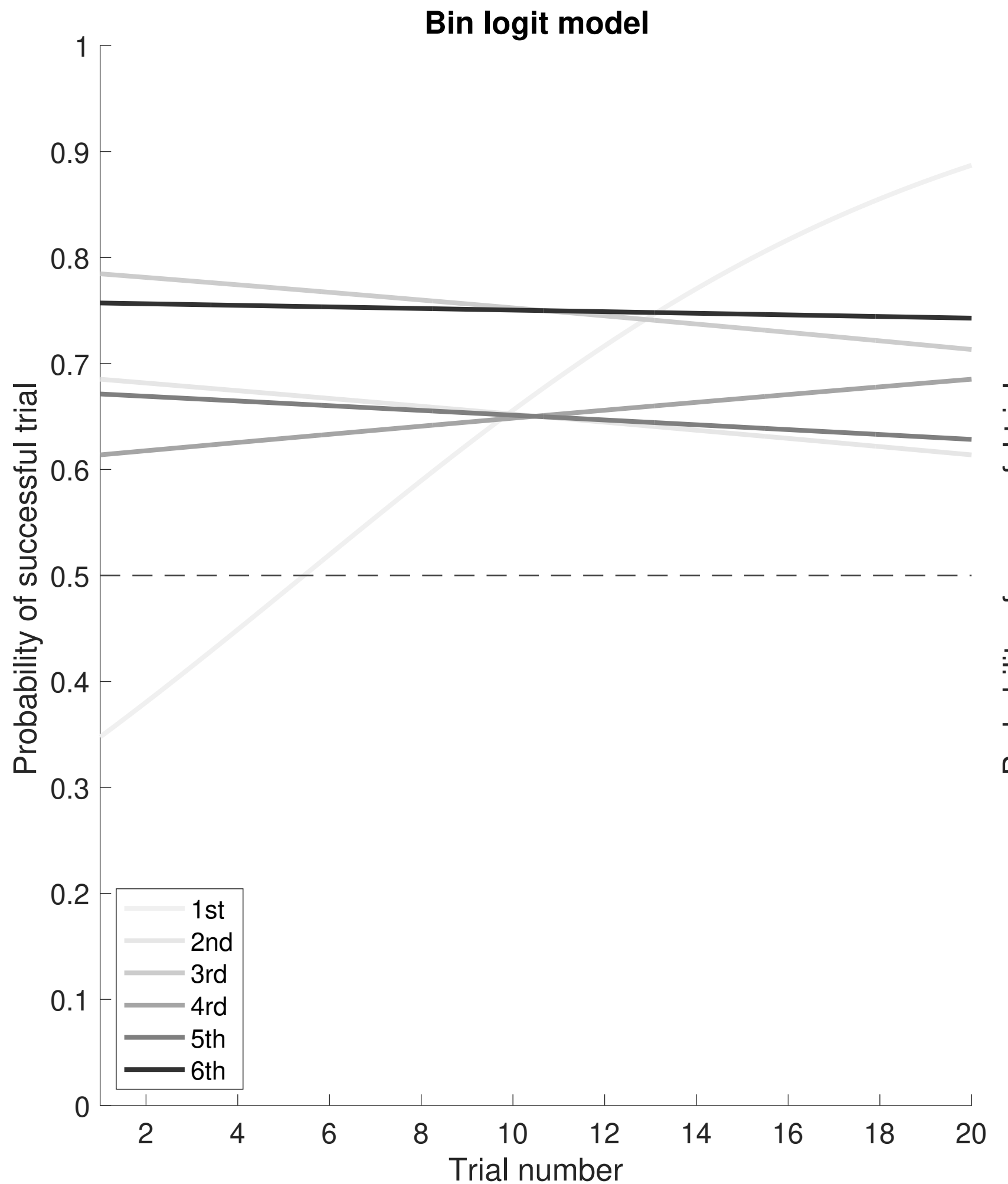
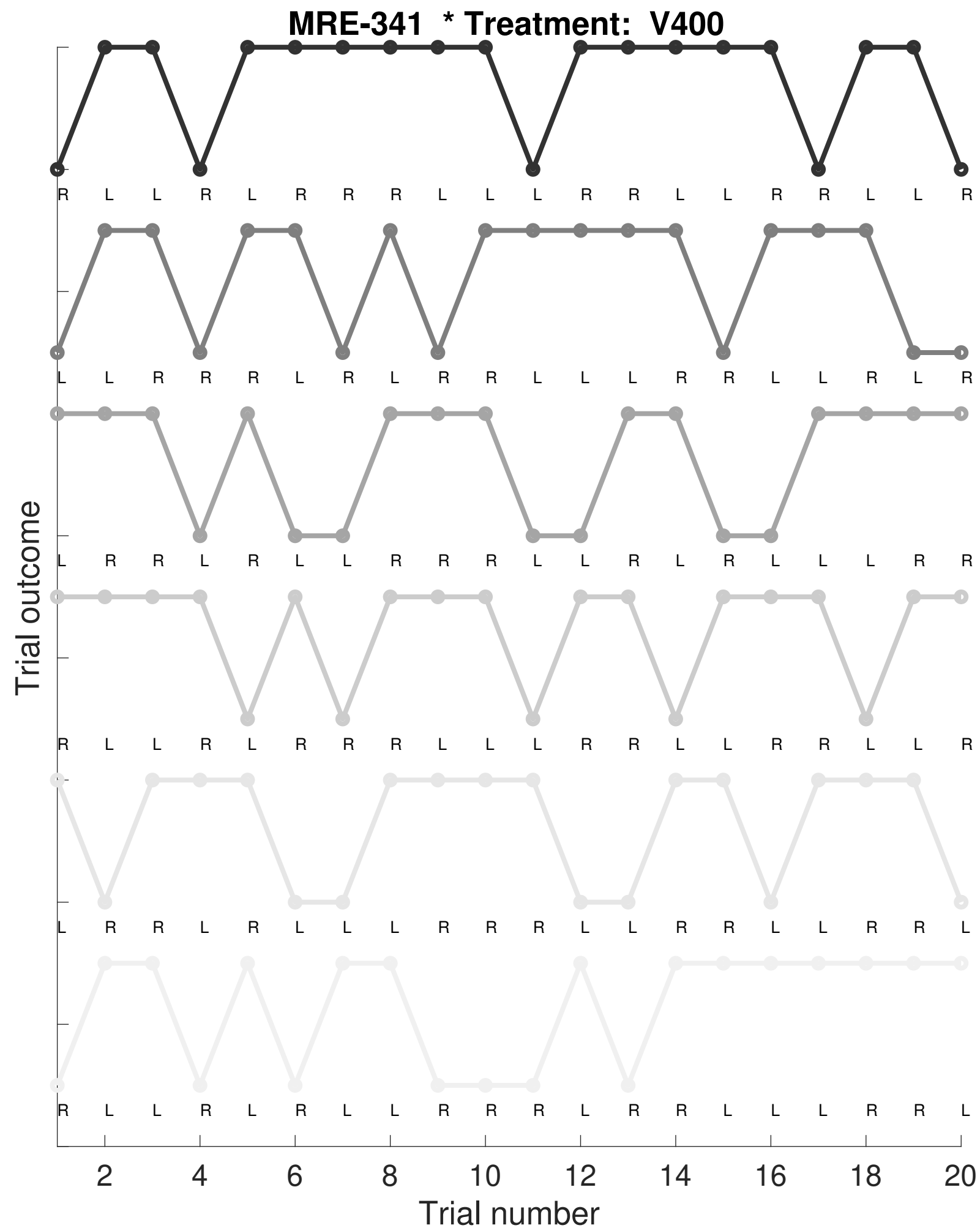
Figure S1 MRE-313 * Treatment: CTL



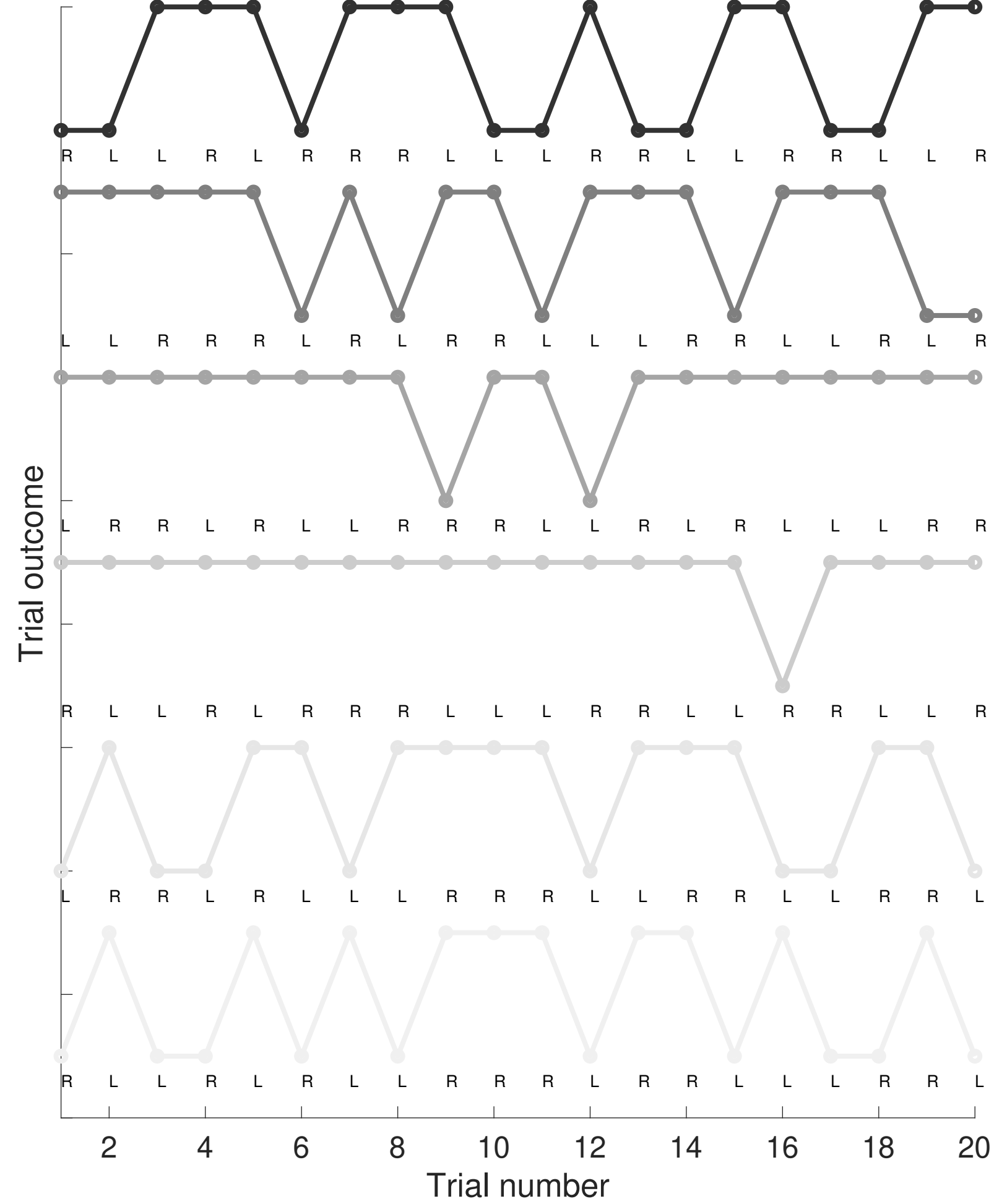




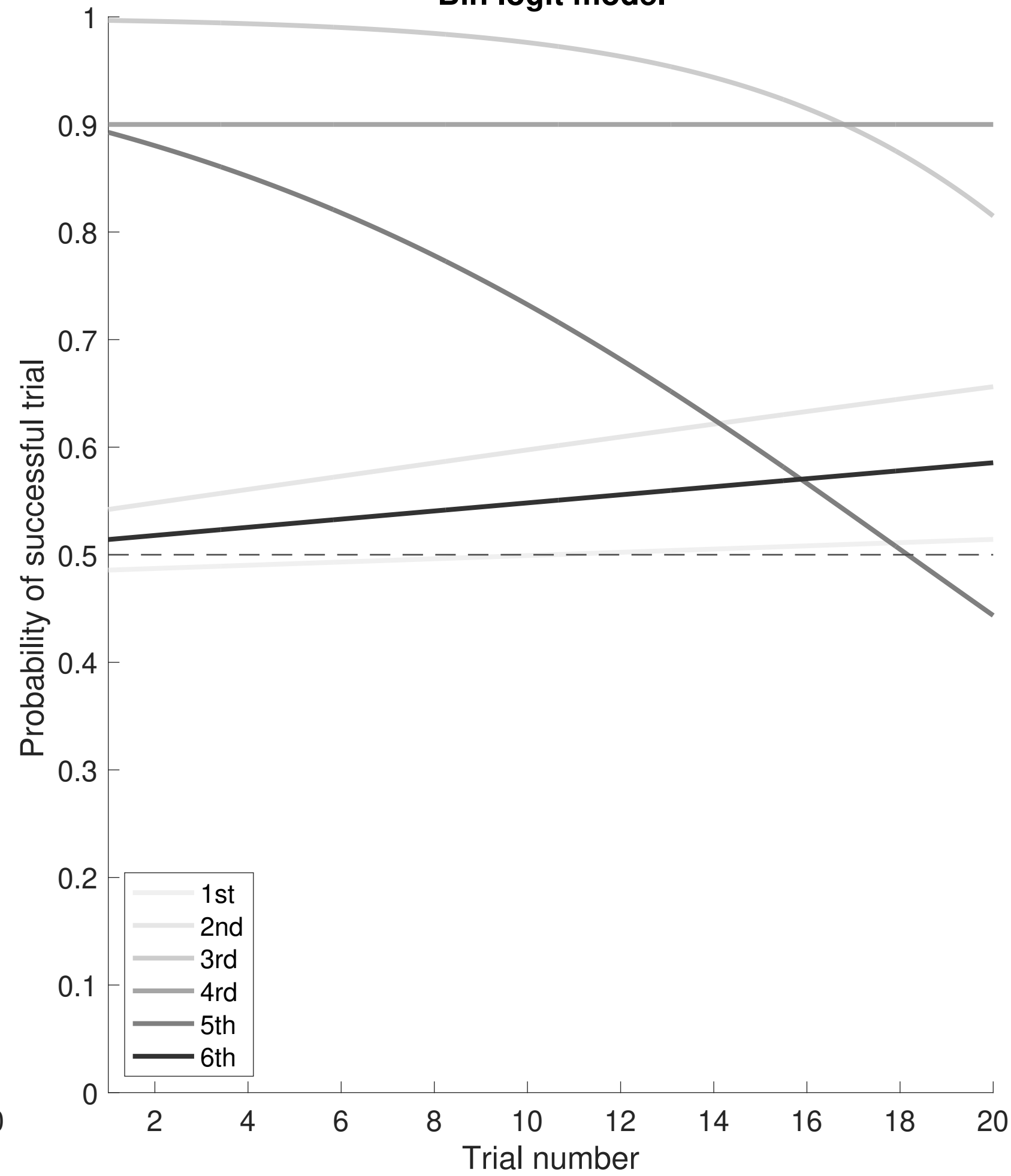




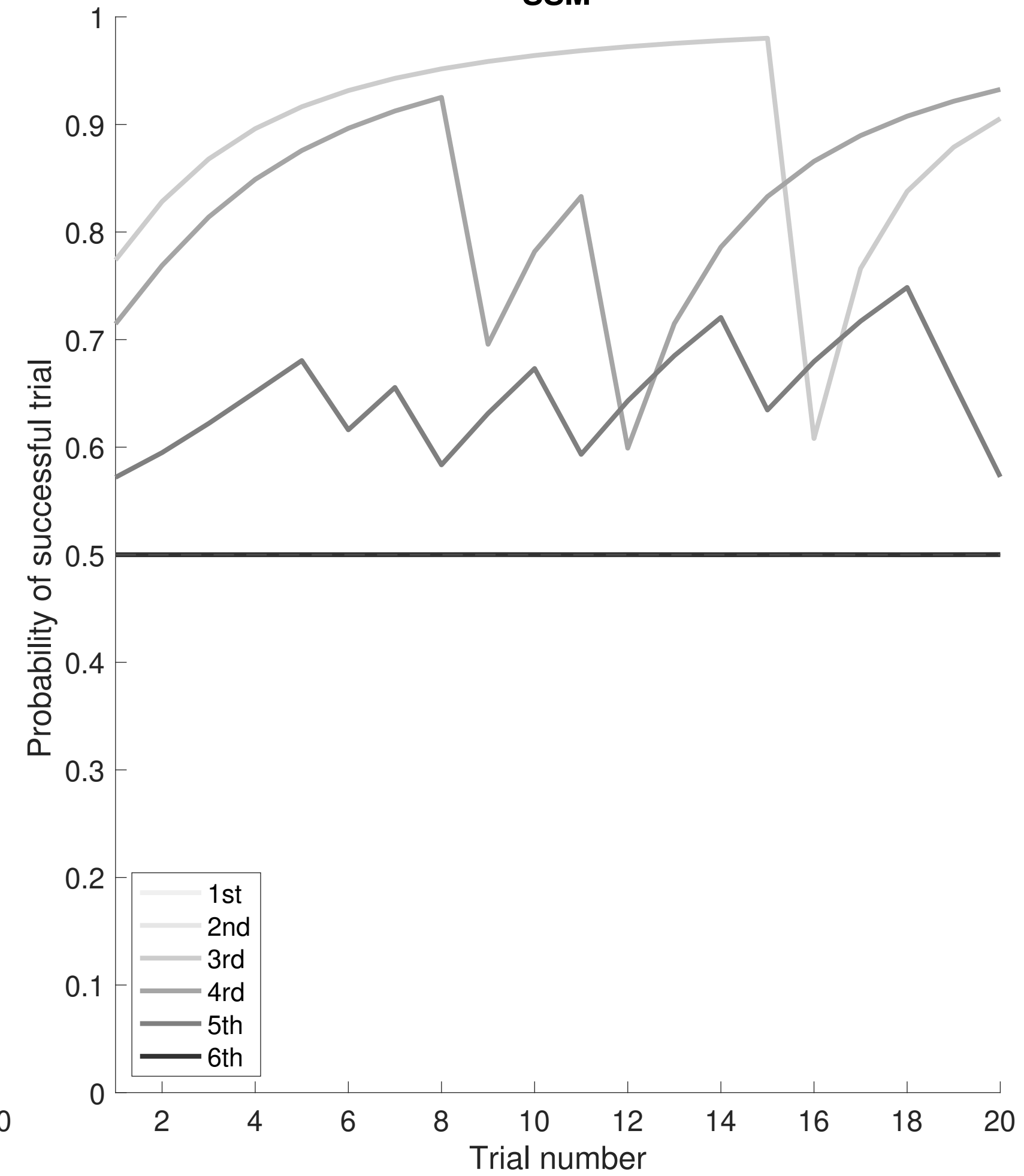
MRE-342 * Treatment: V400

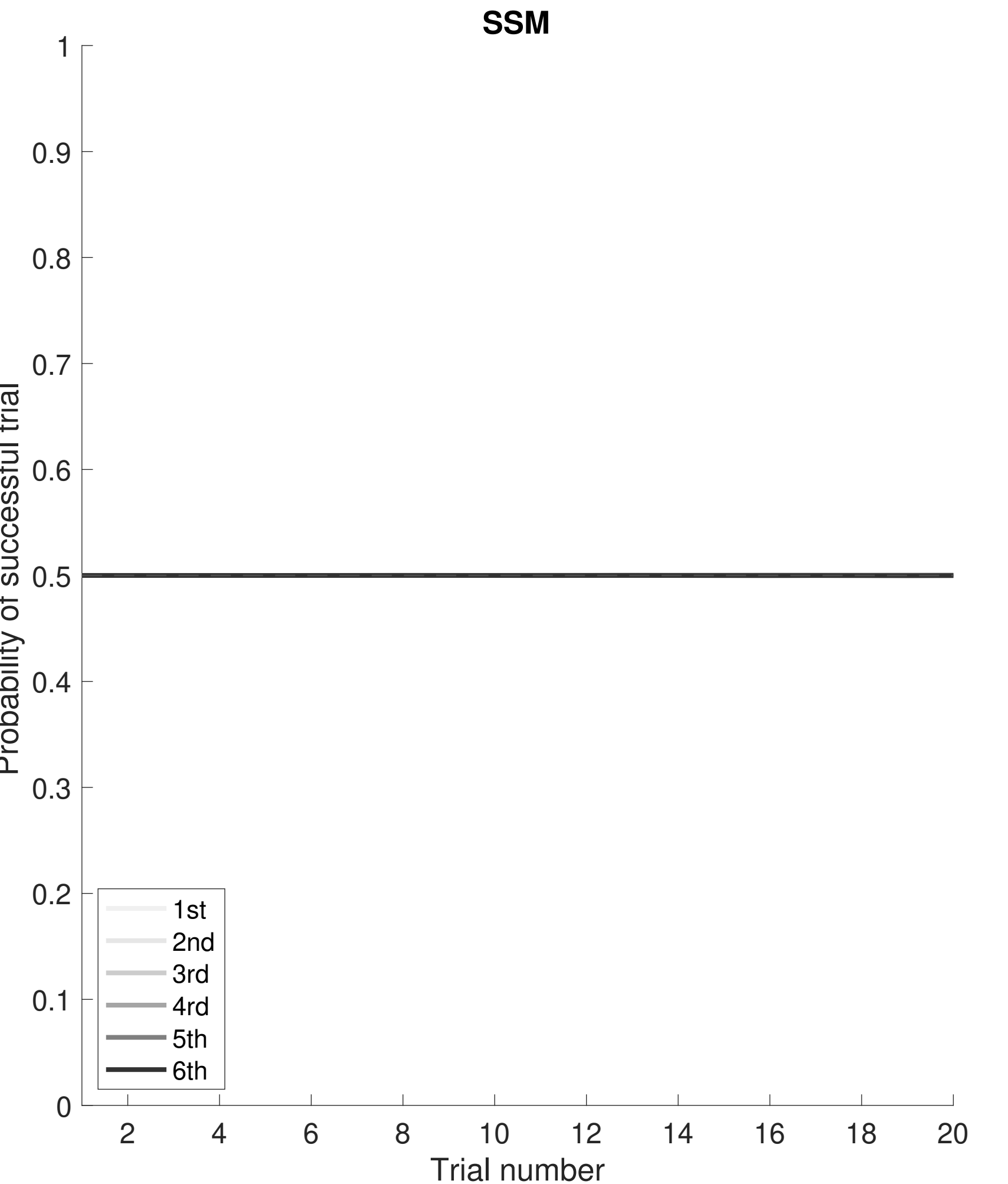
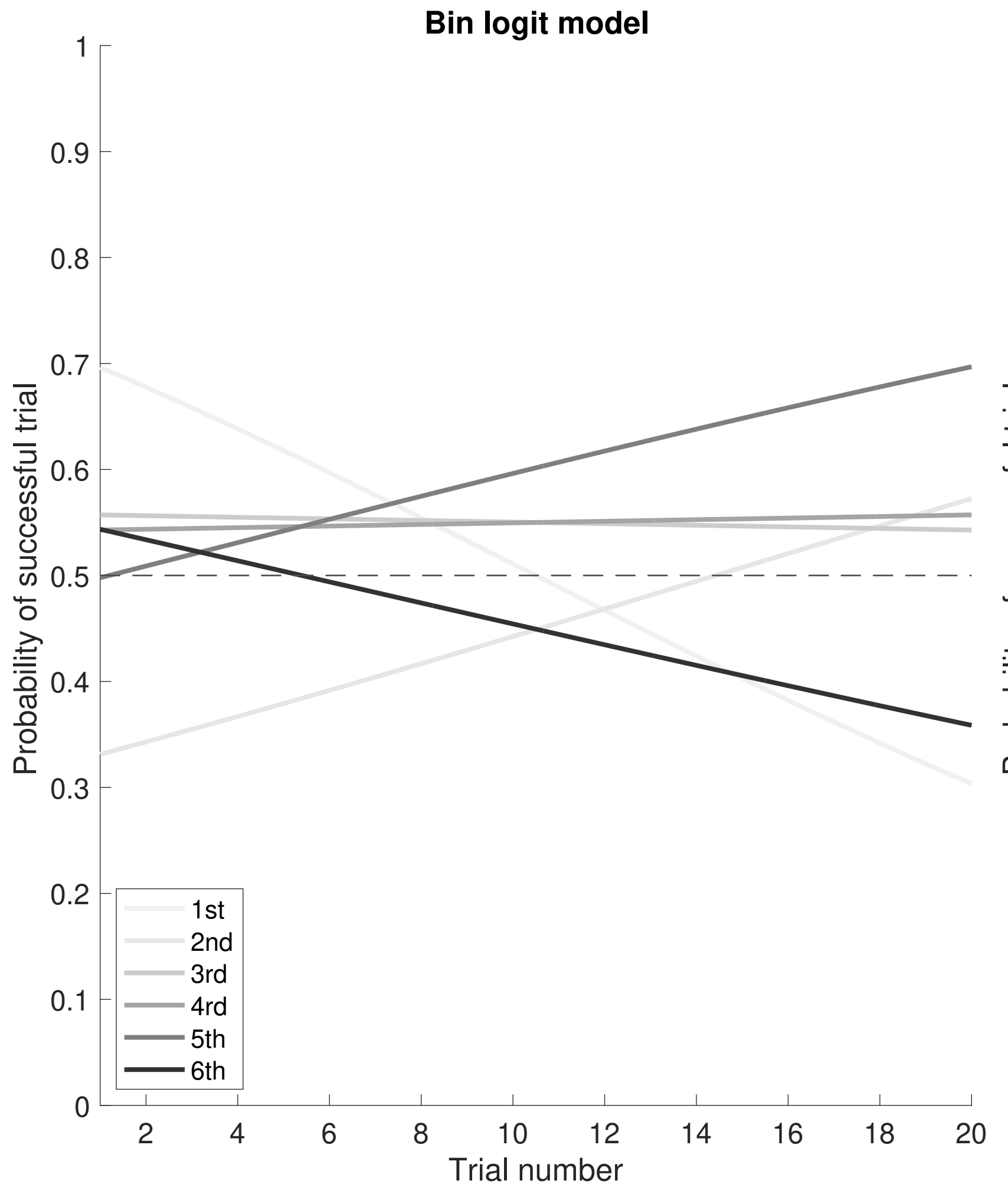
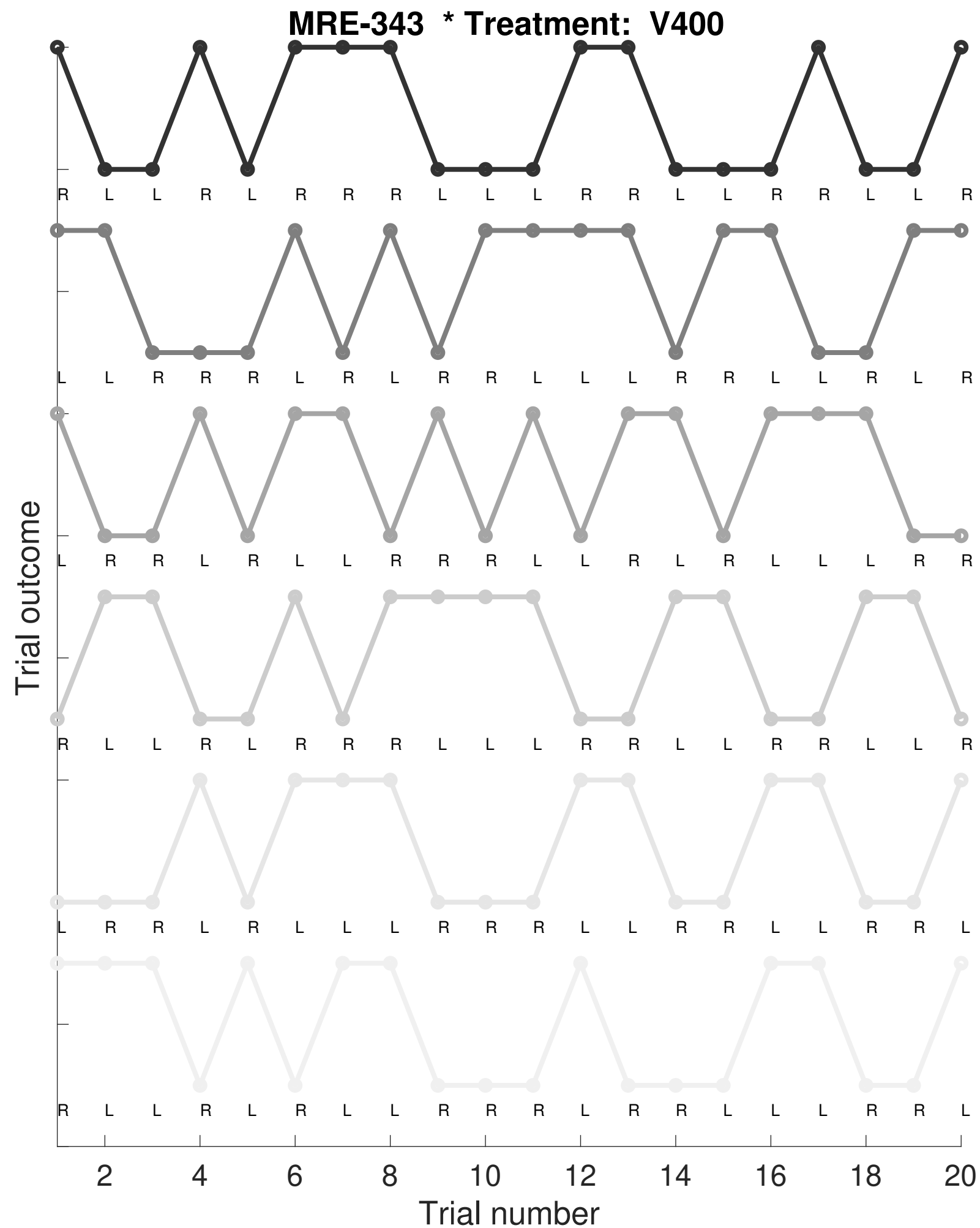


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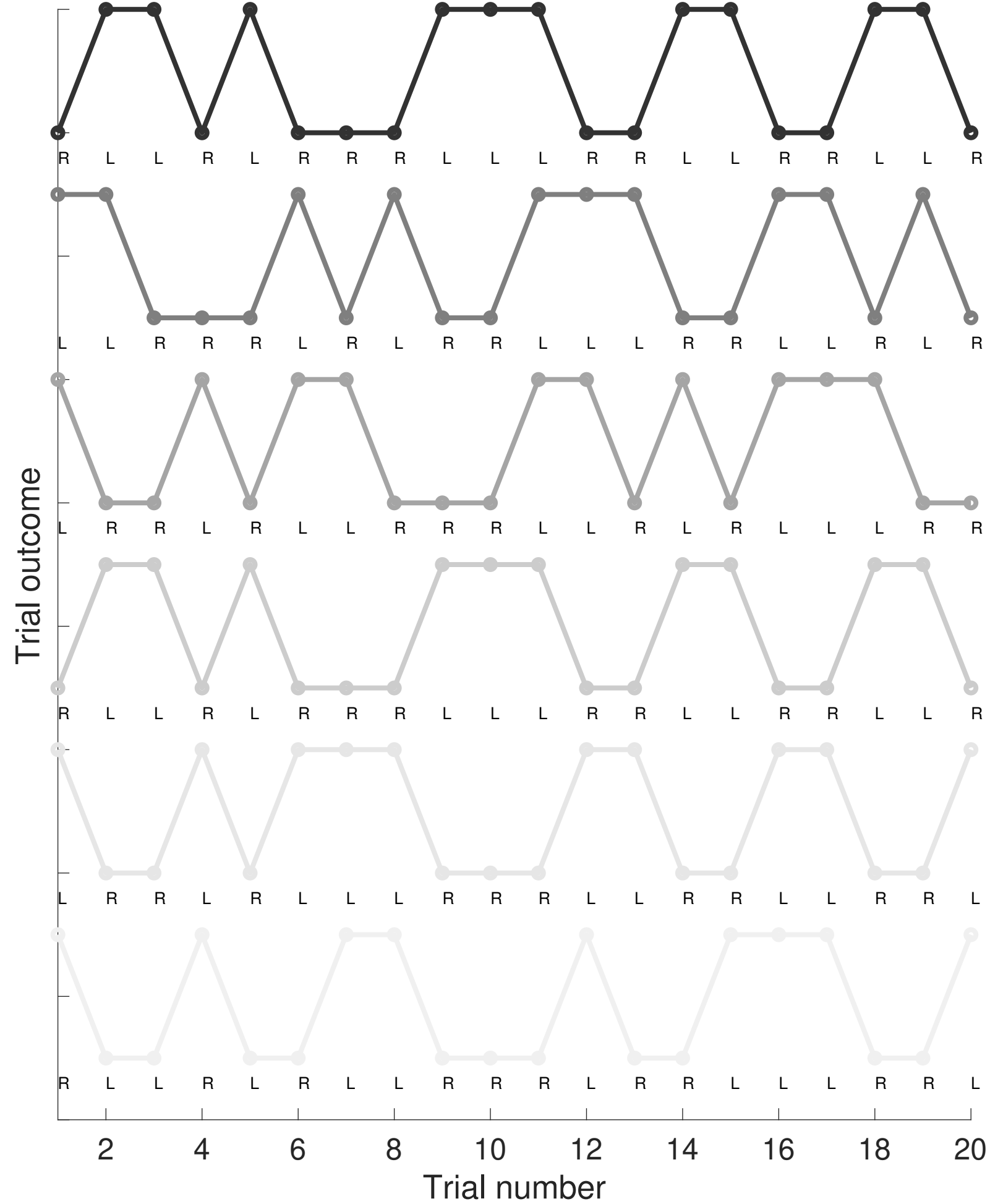


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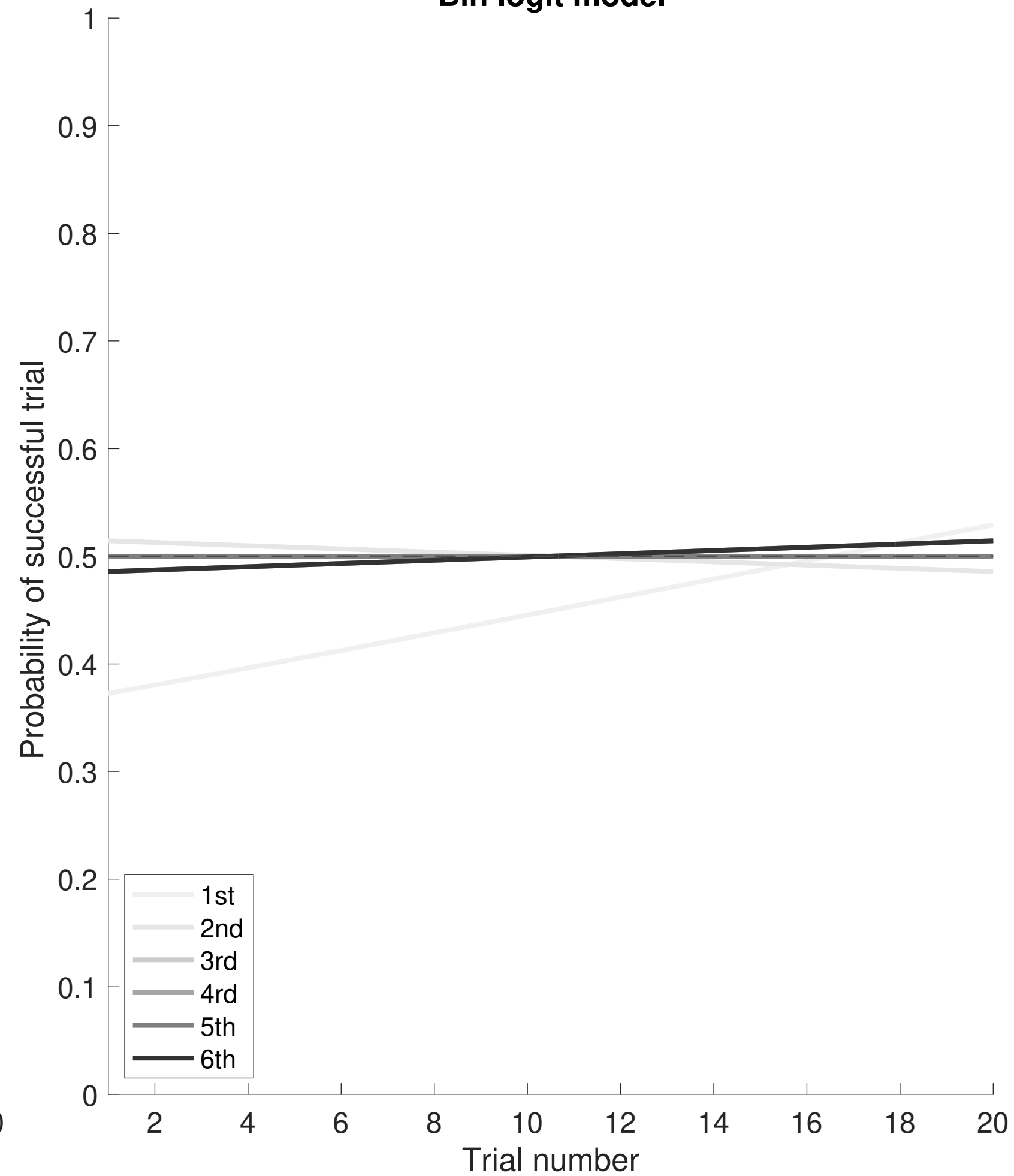




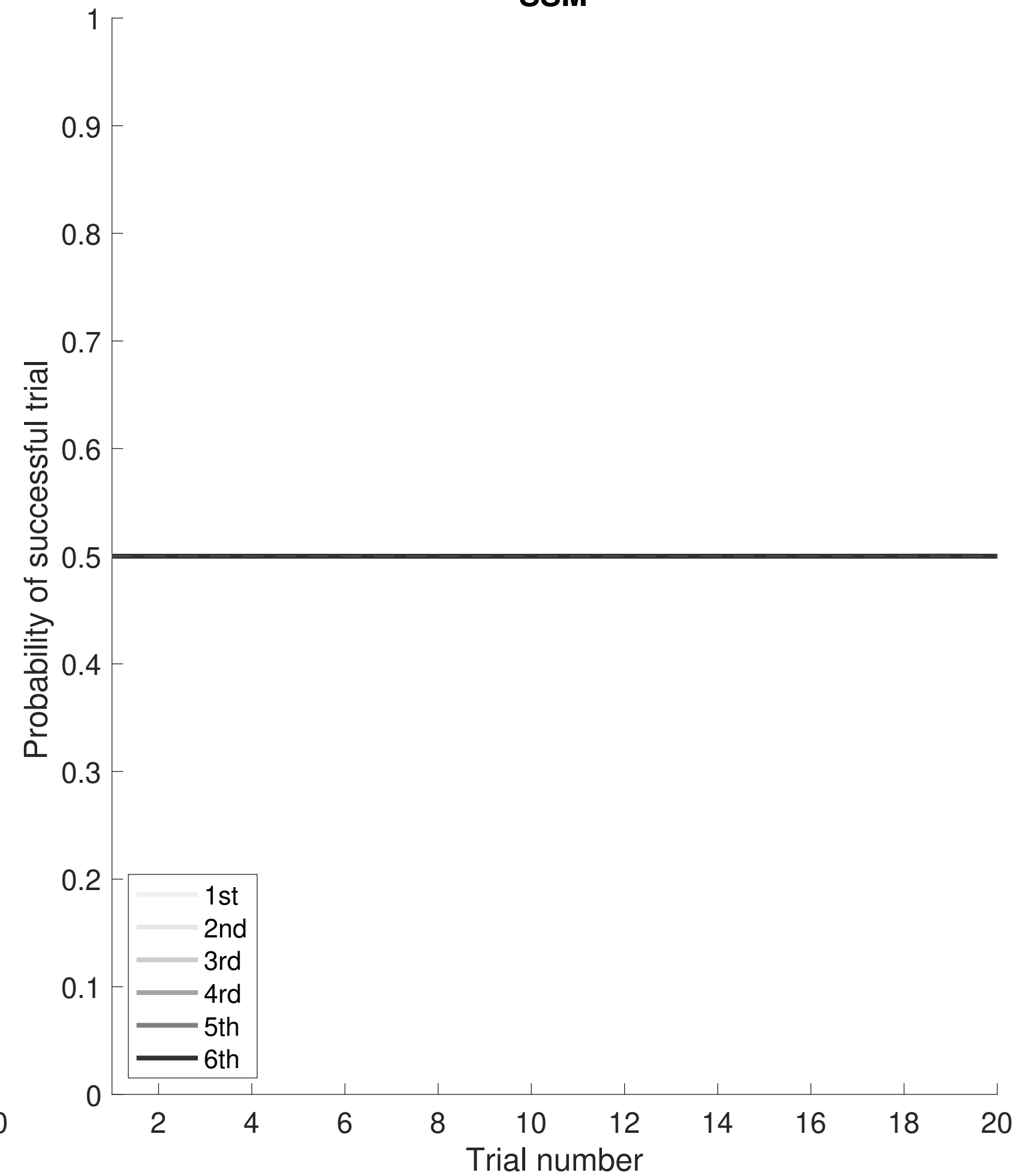
MRE-344 * Treatment: V400



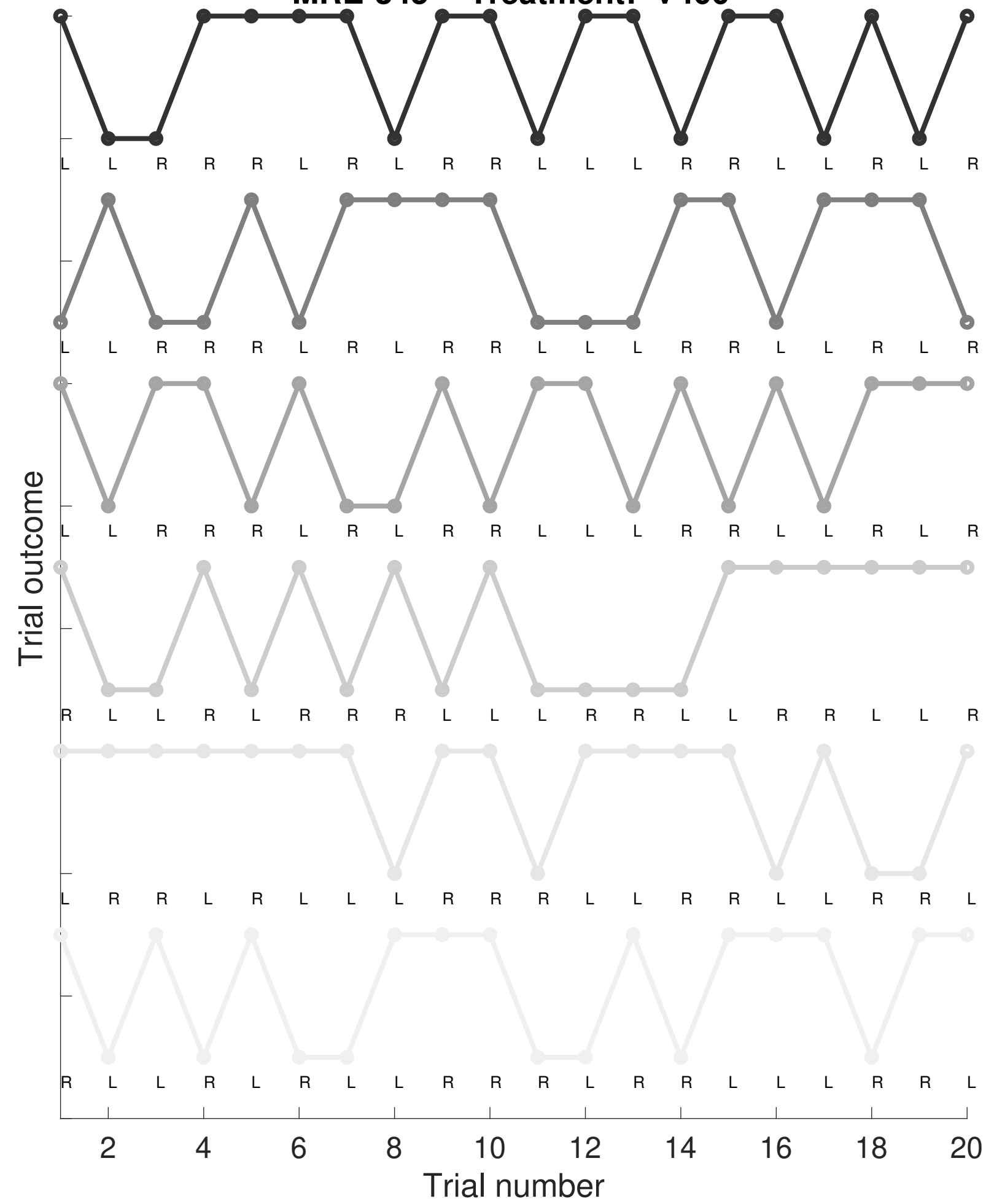
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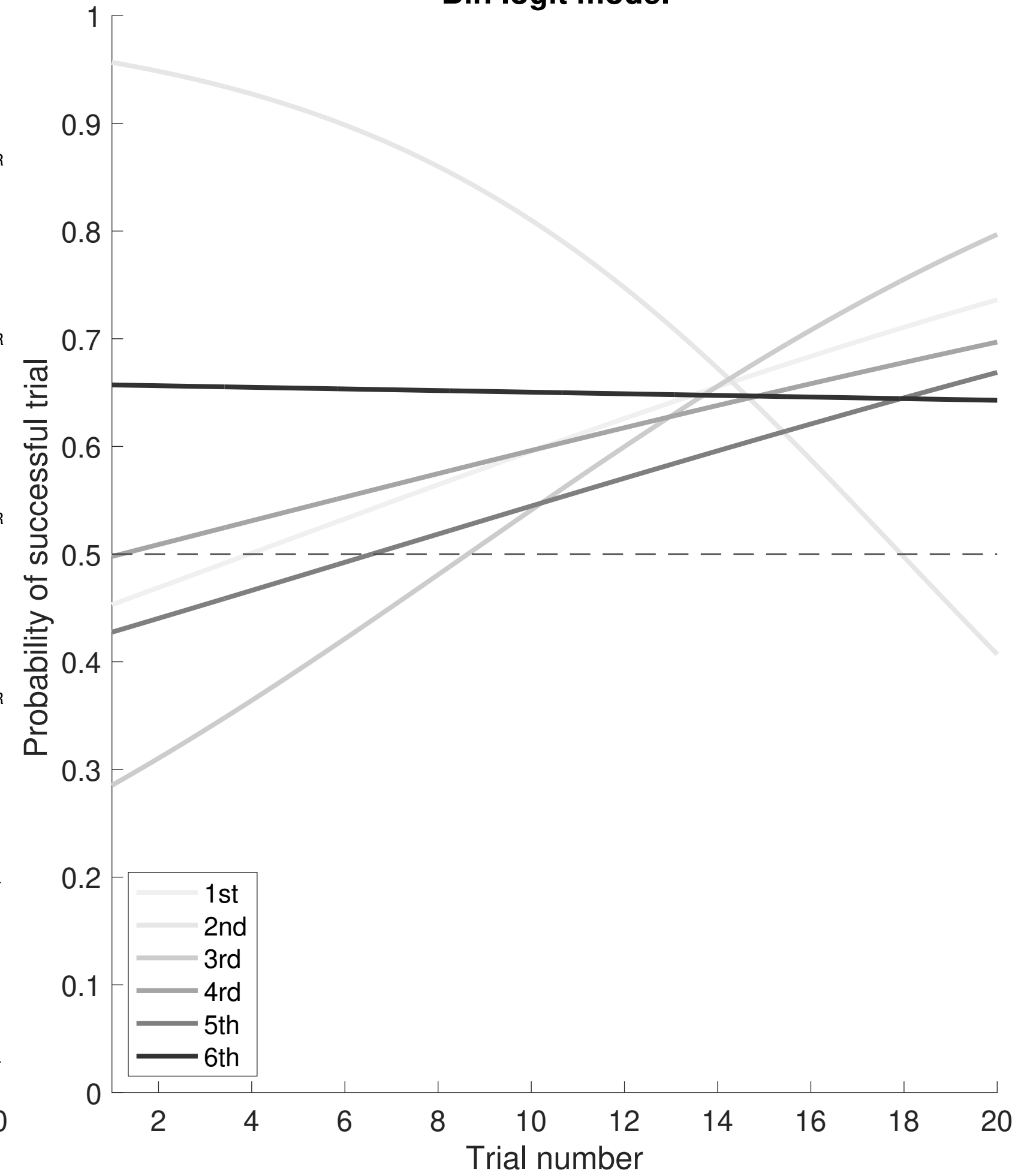
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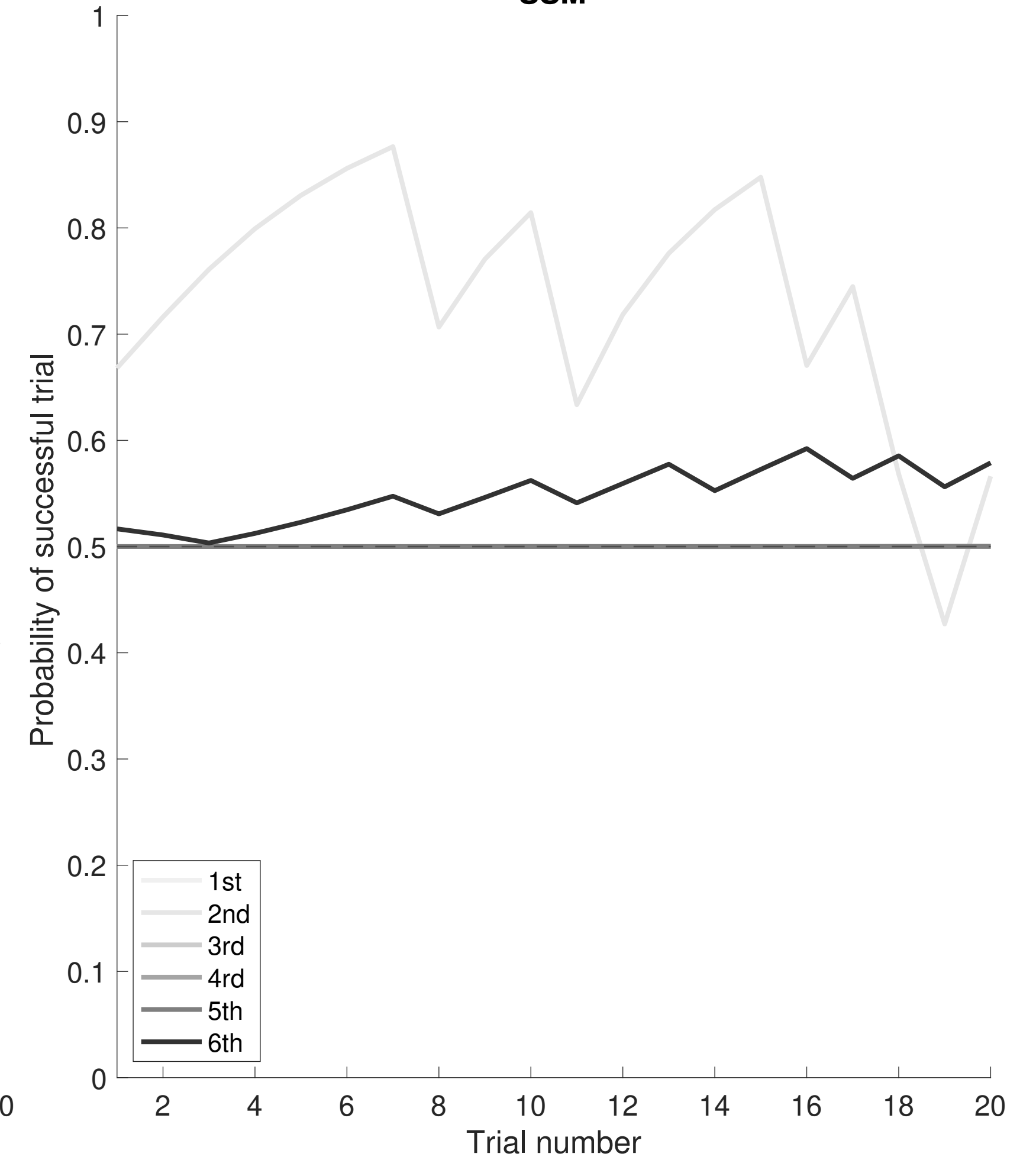
MRE-345 * Treatment: V400



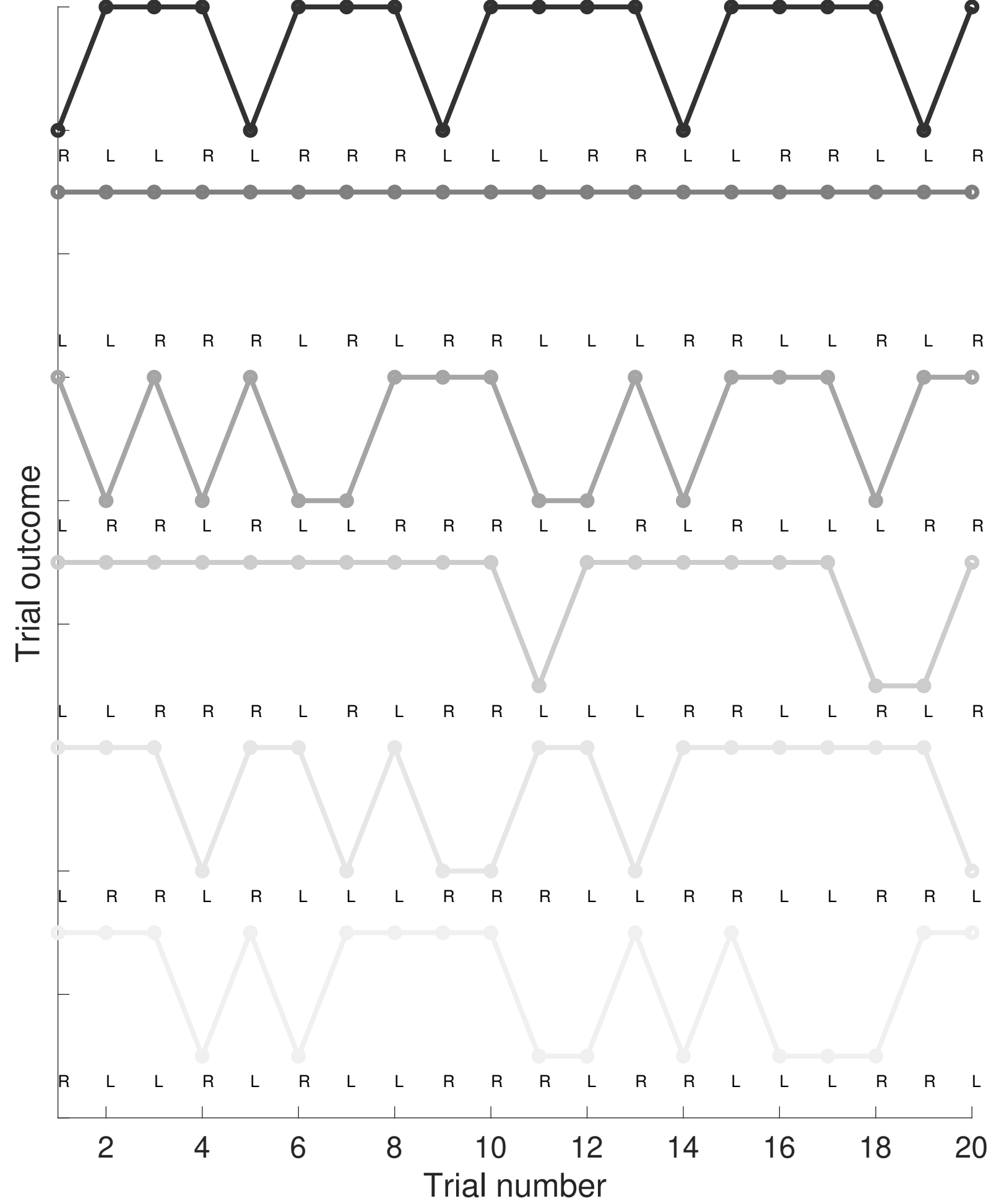
Bin logit model



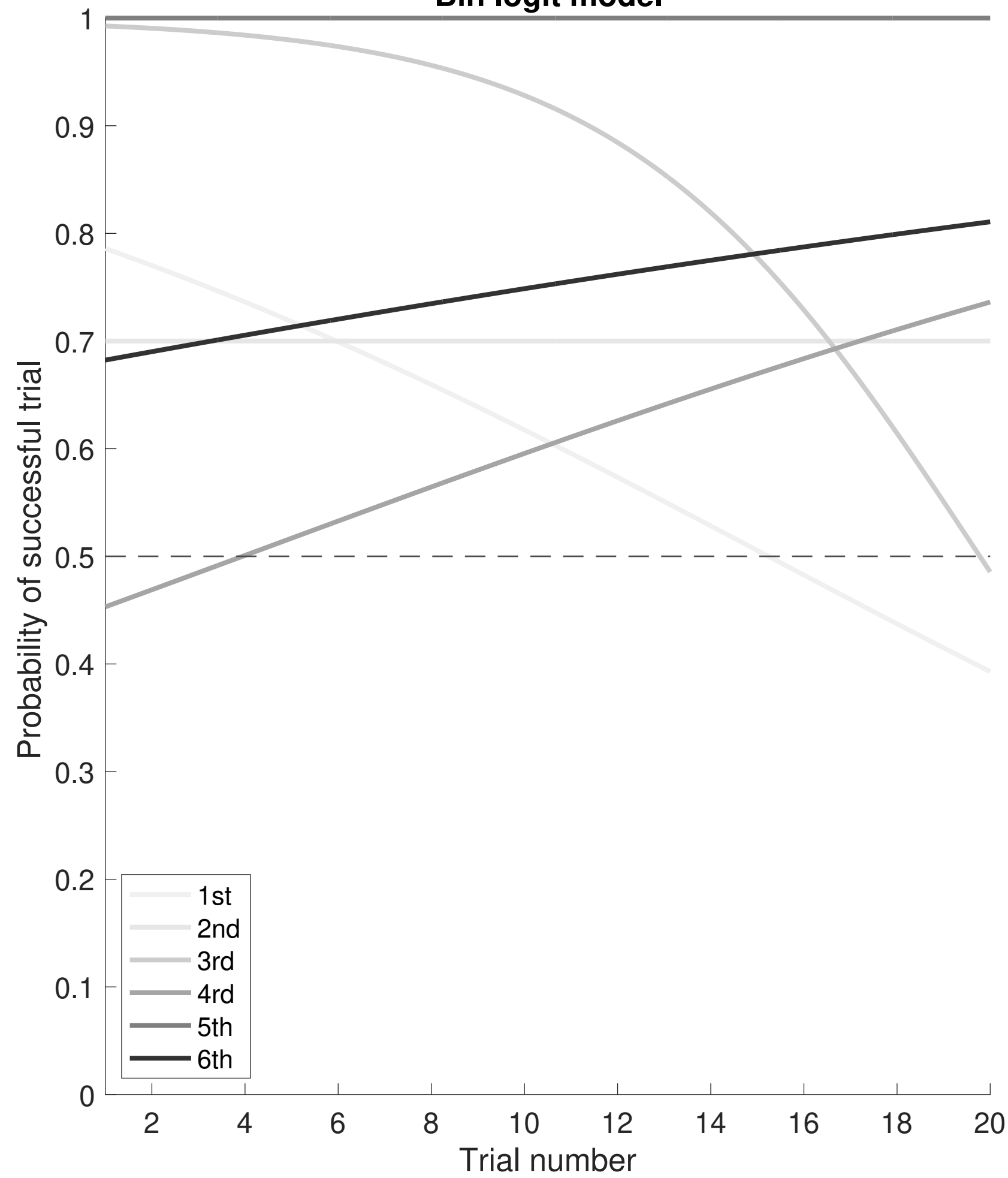
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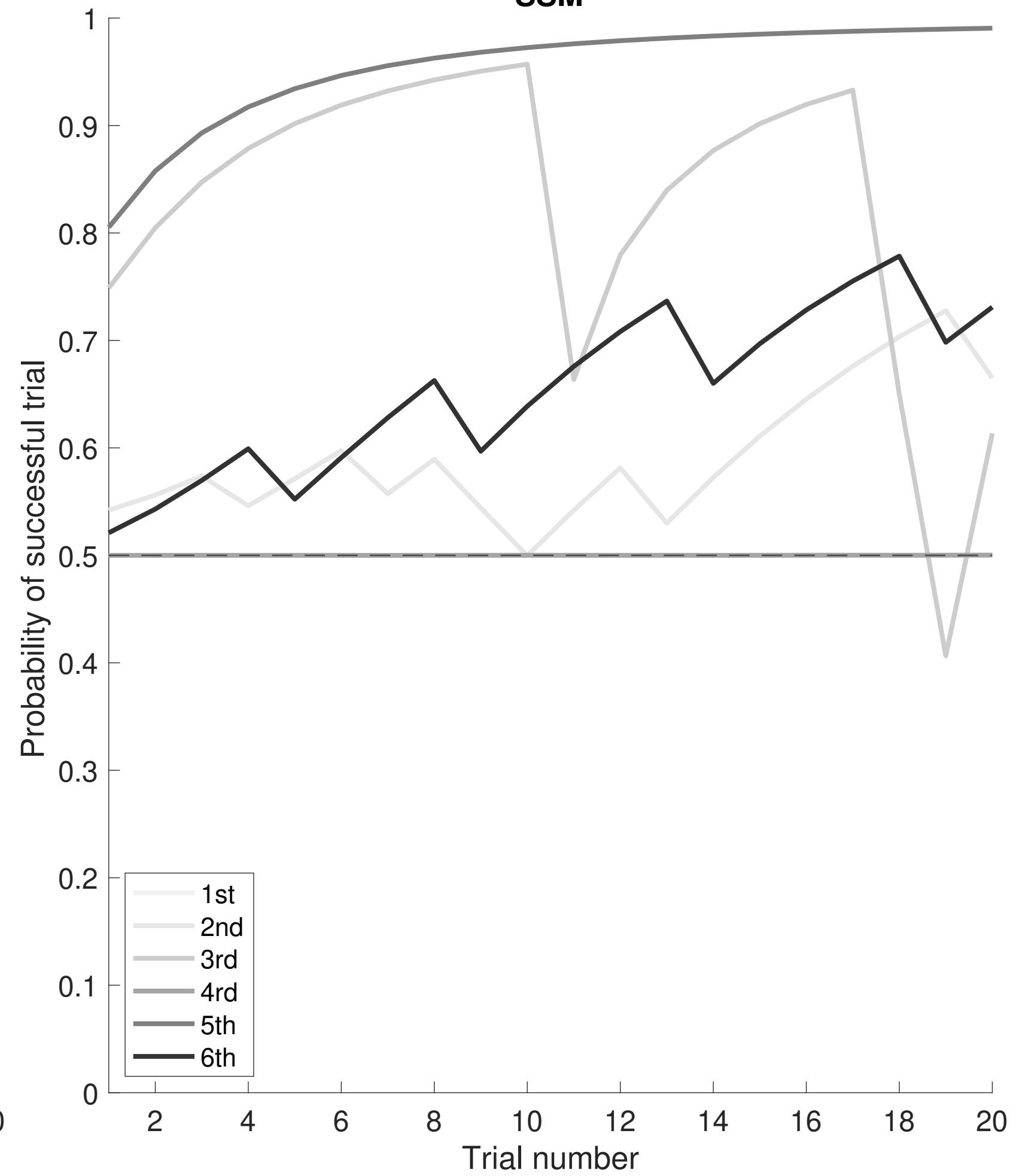
MRE-346 * Treatment: V400

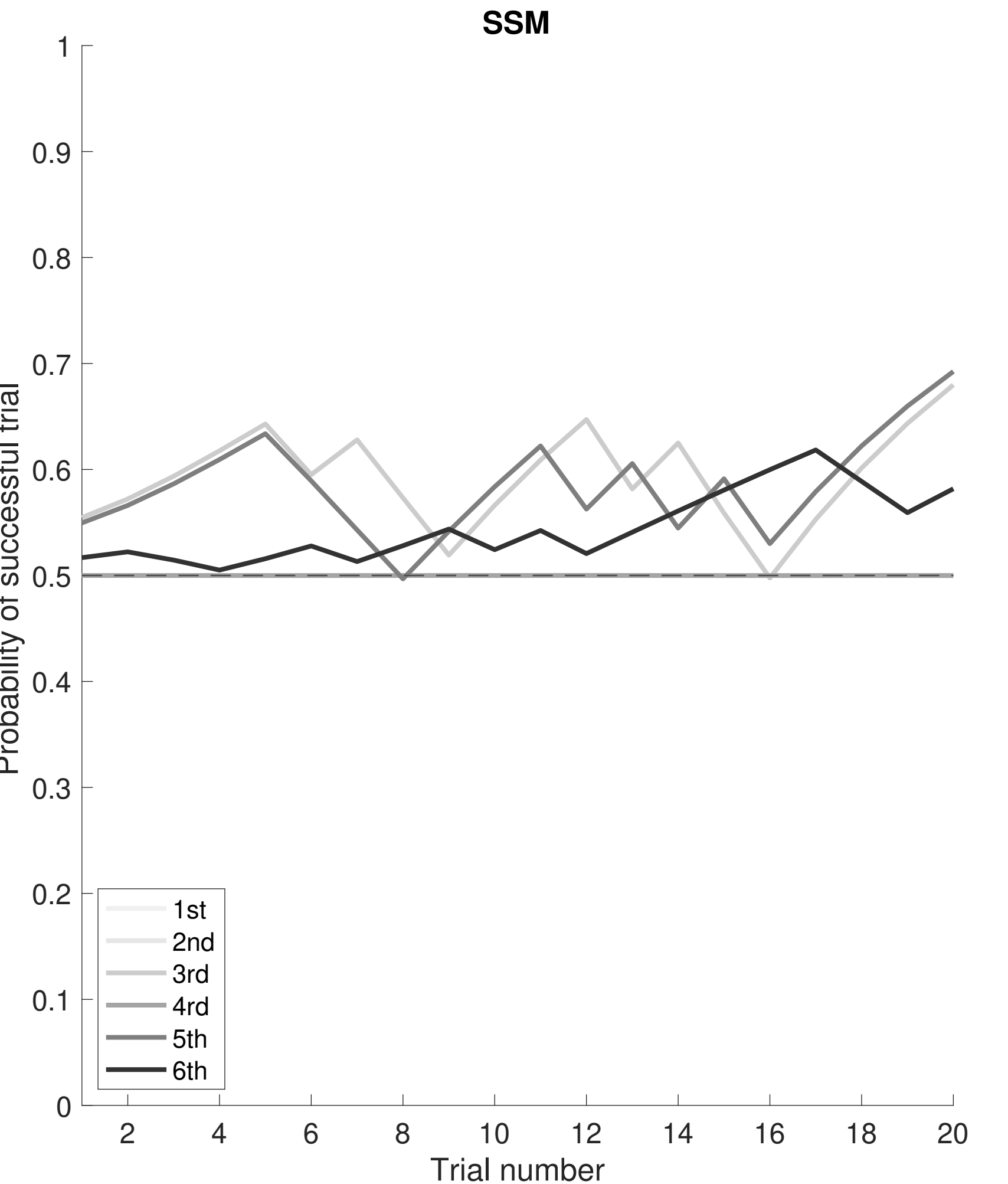
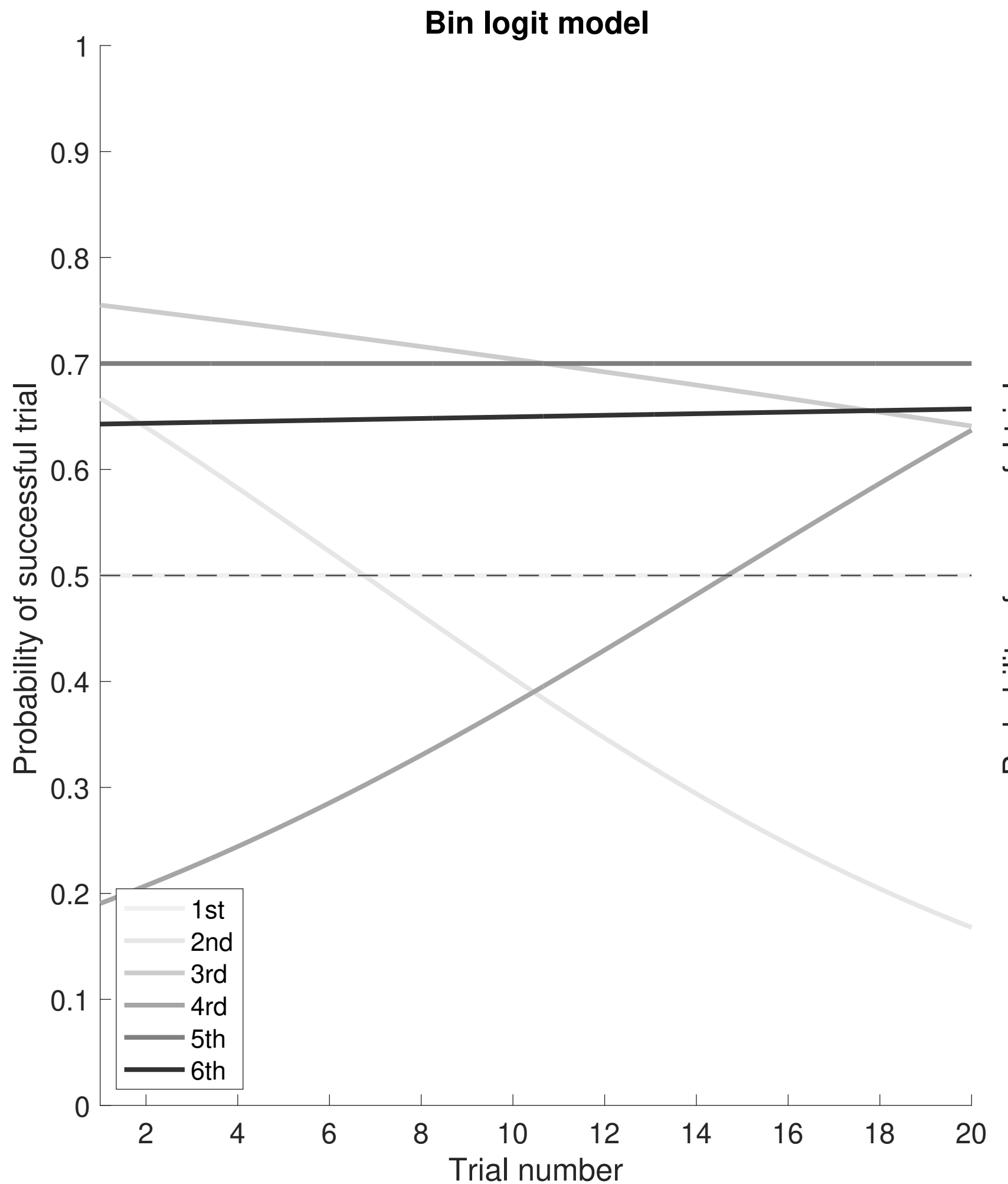
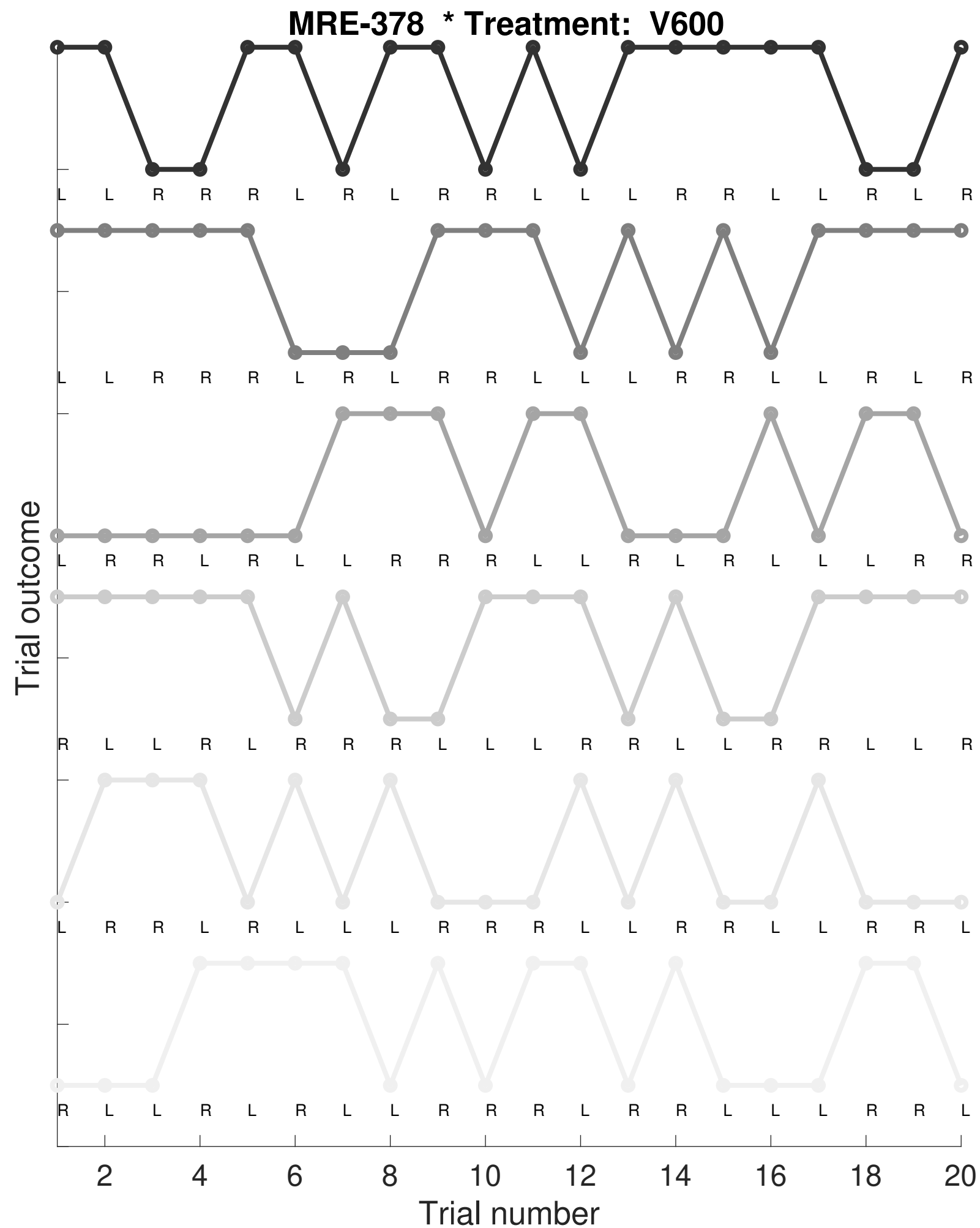


Bin logit model

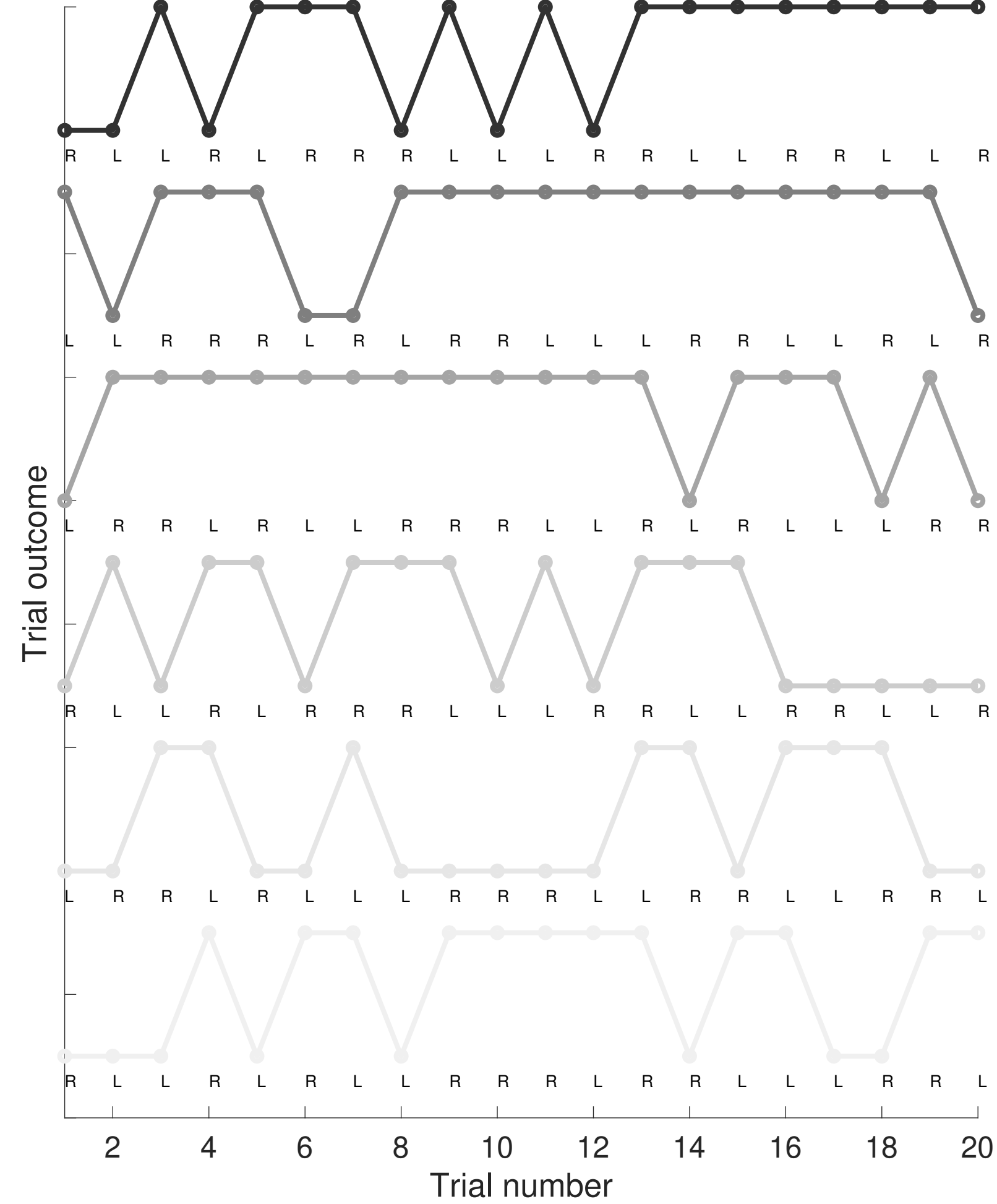


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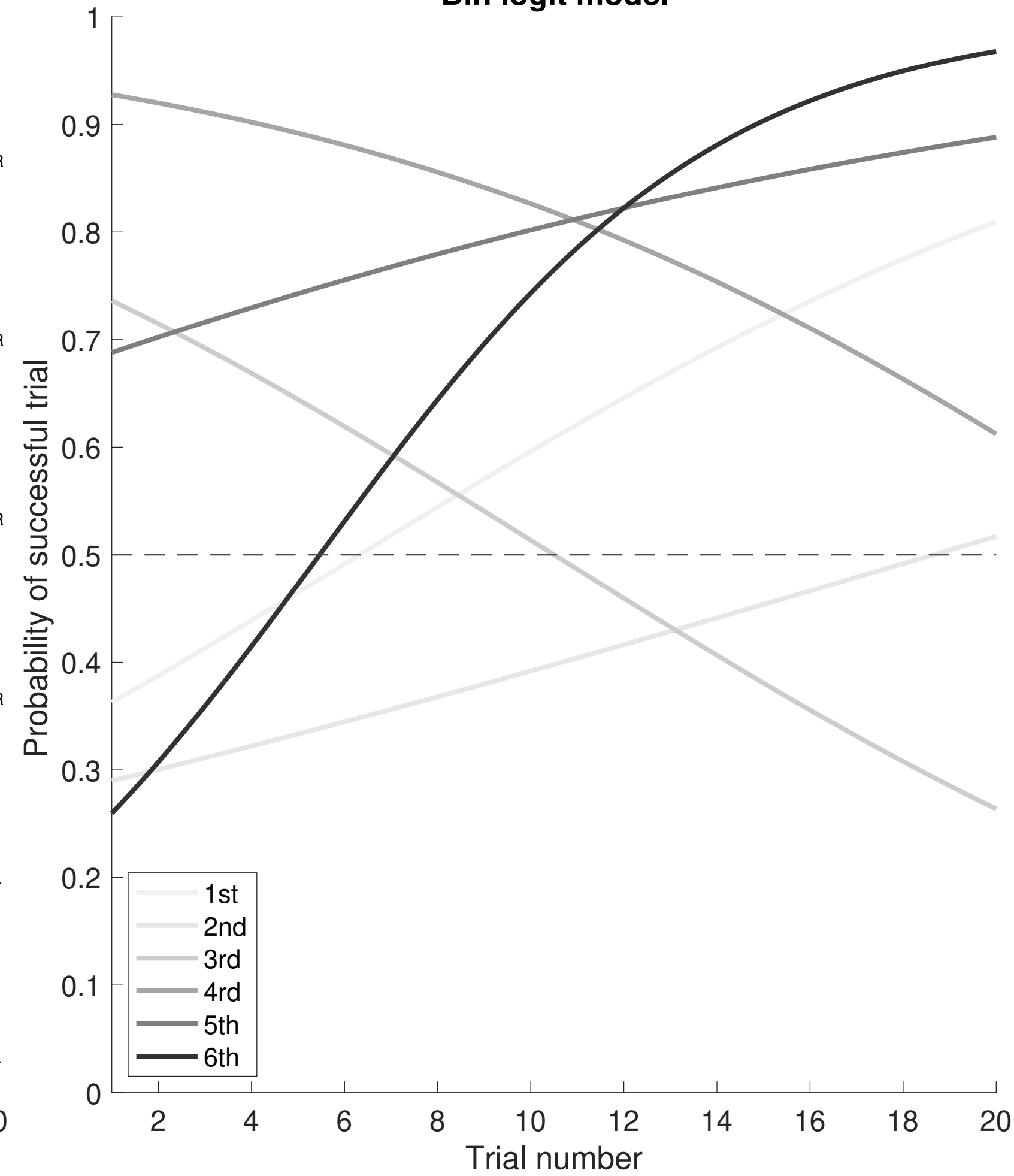




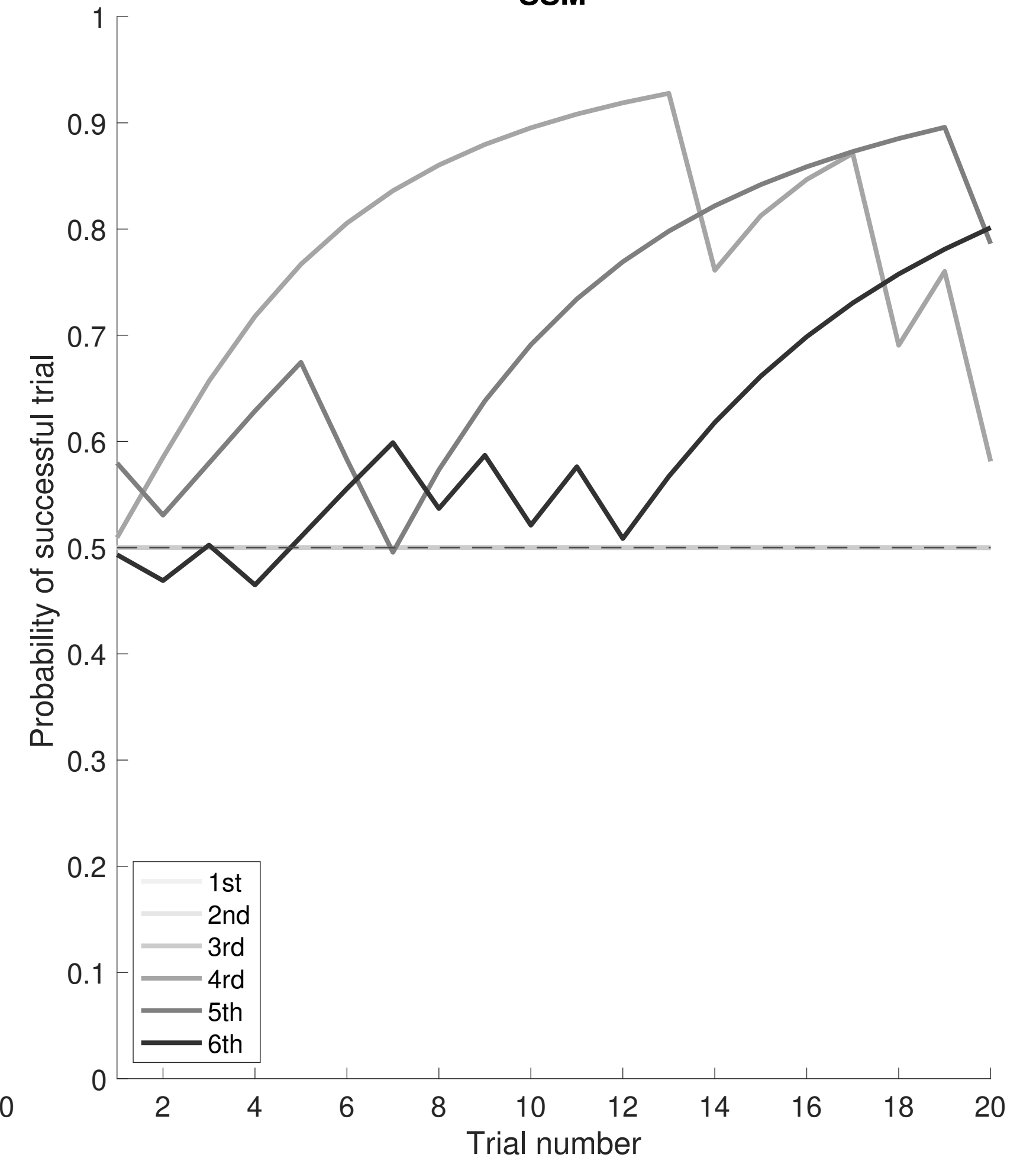
MRE-379 * Treatment: V600

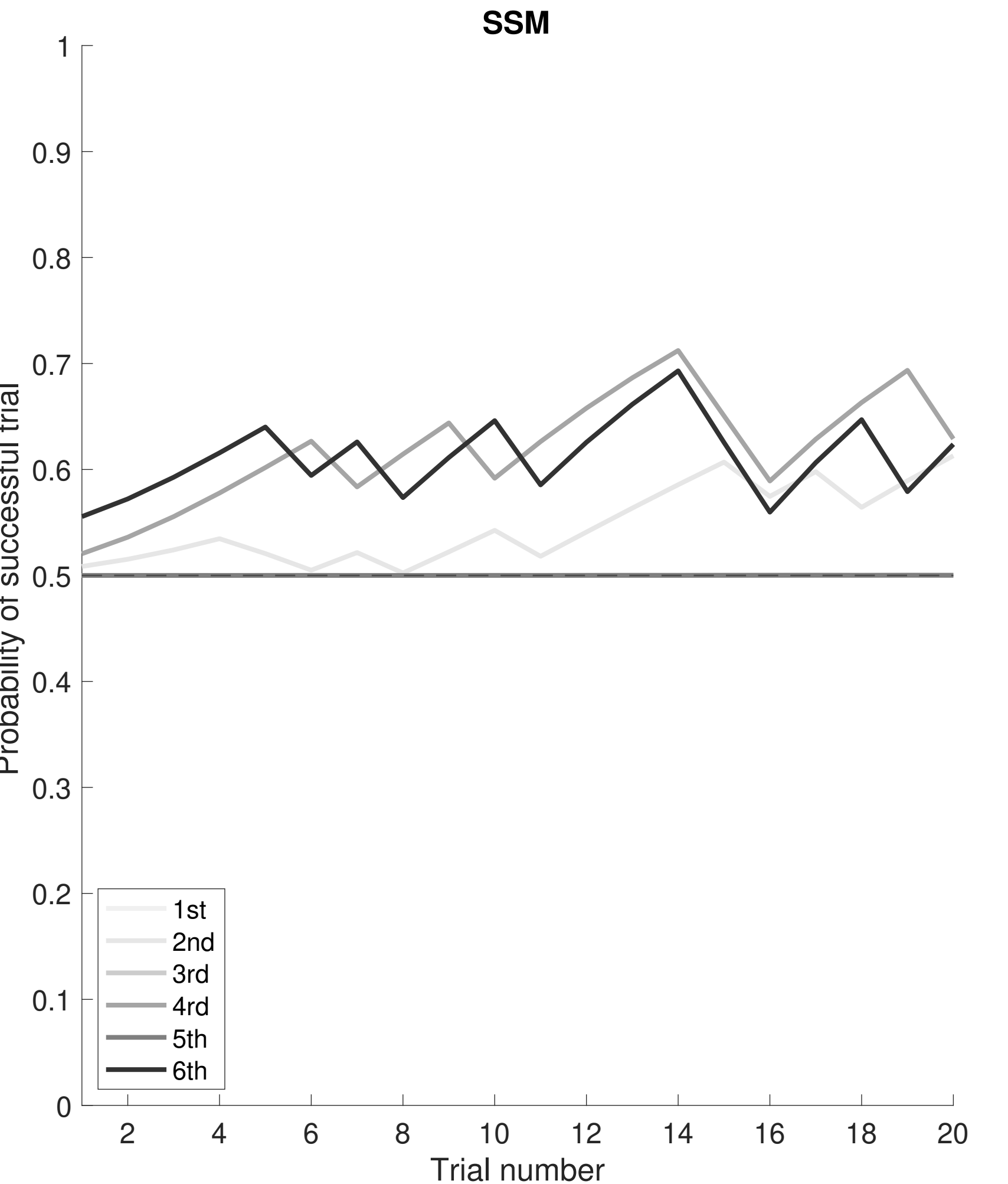
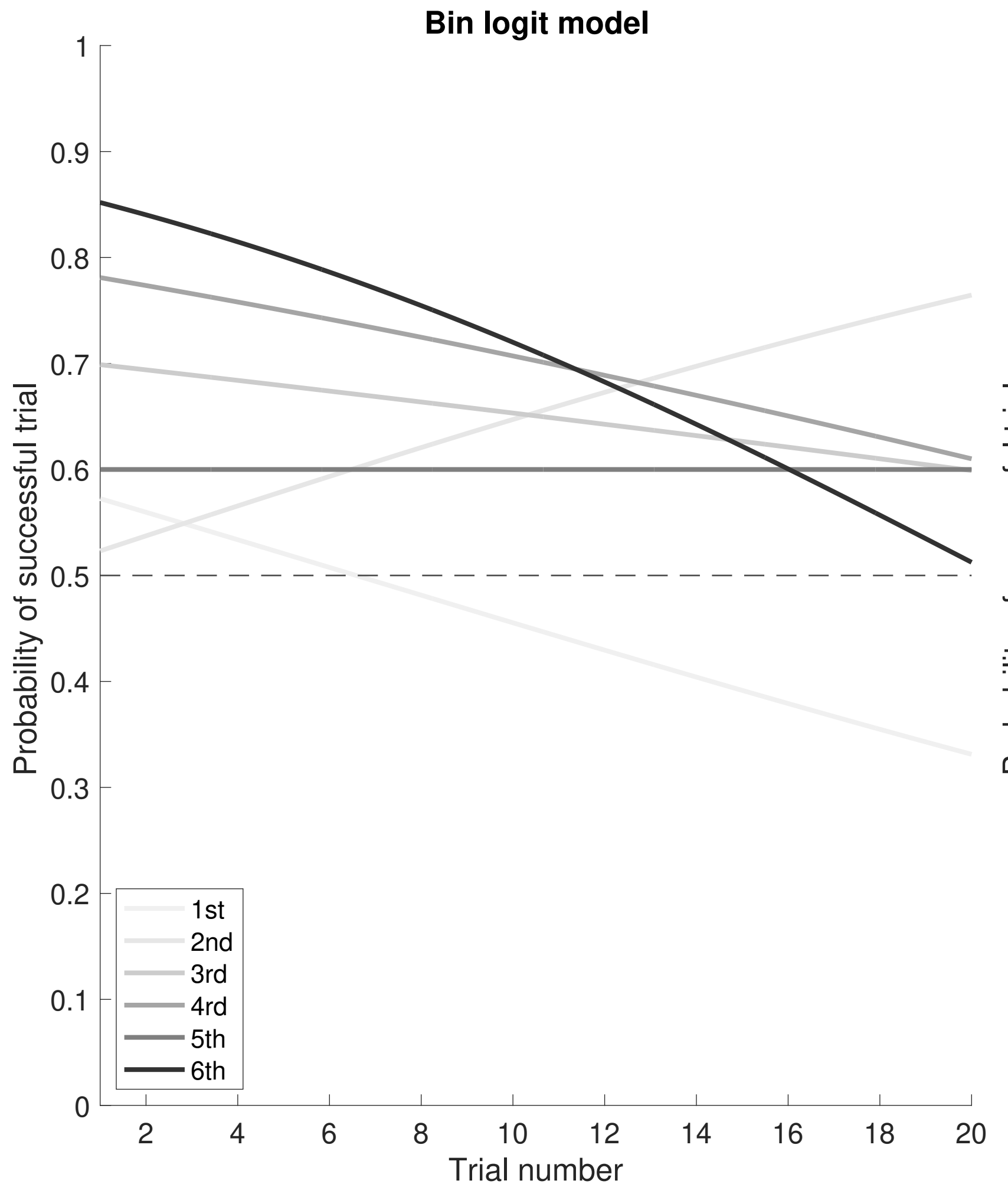
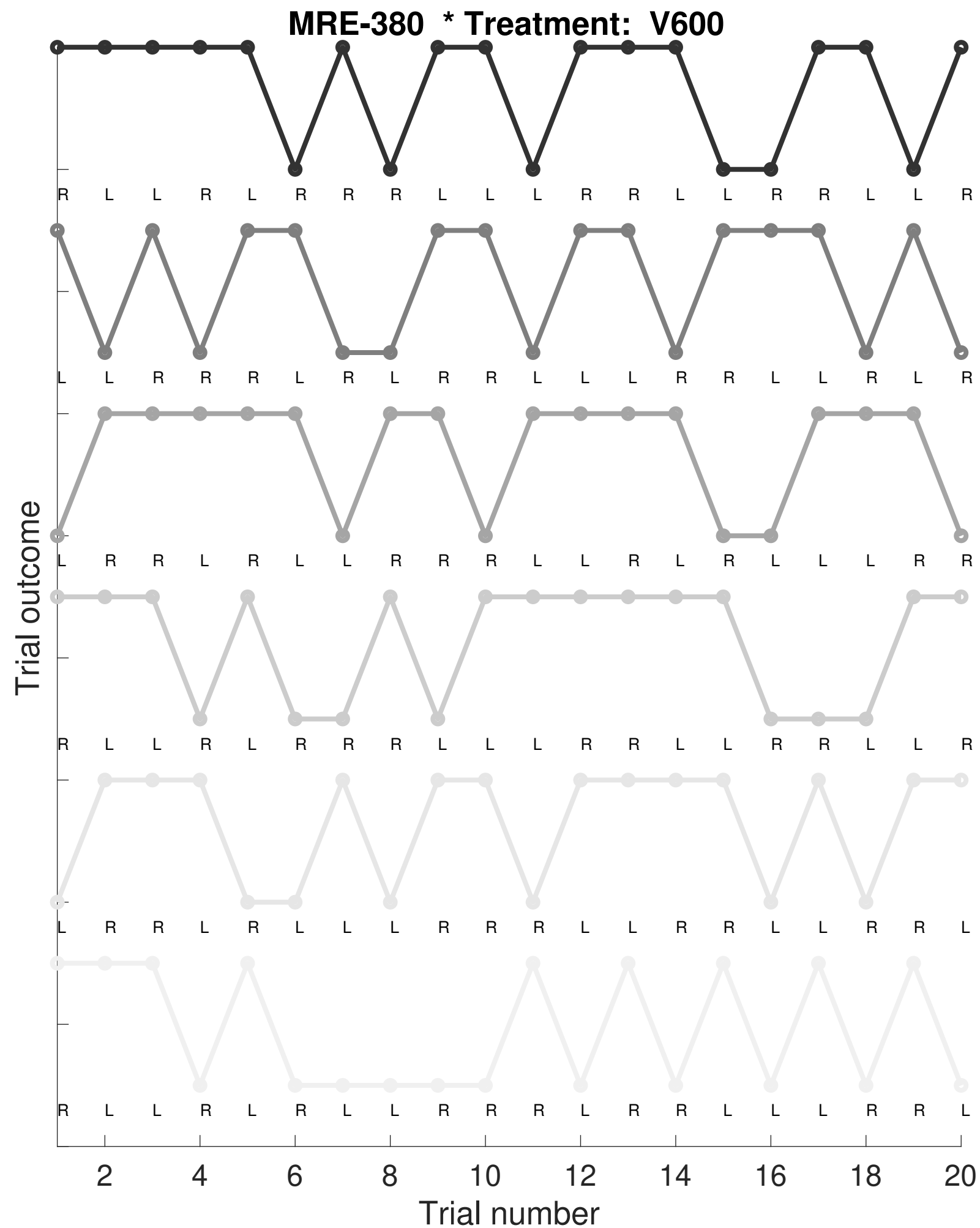


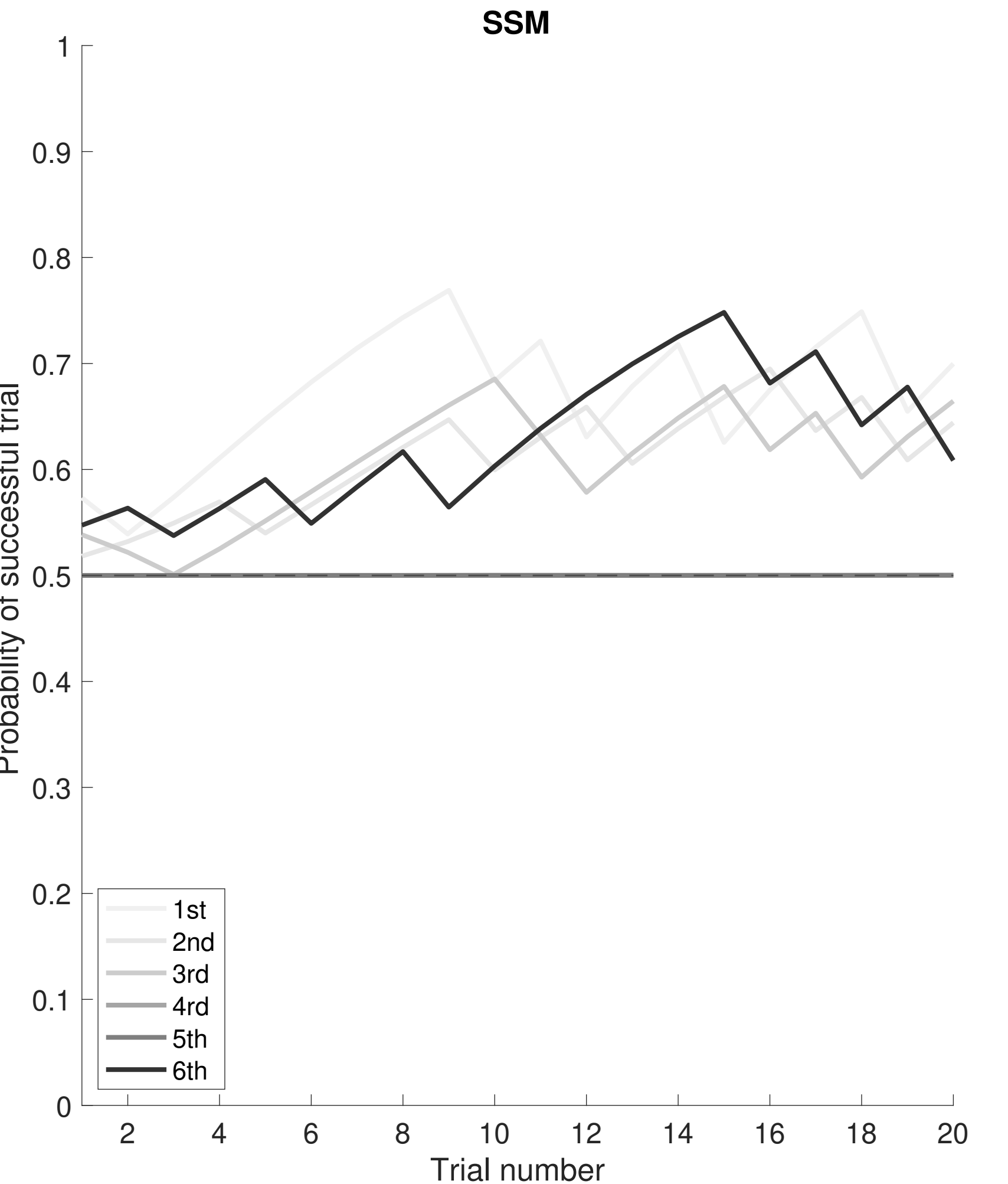
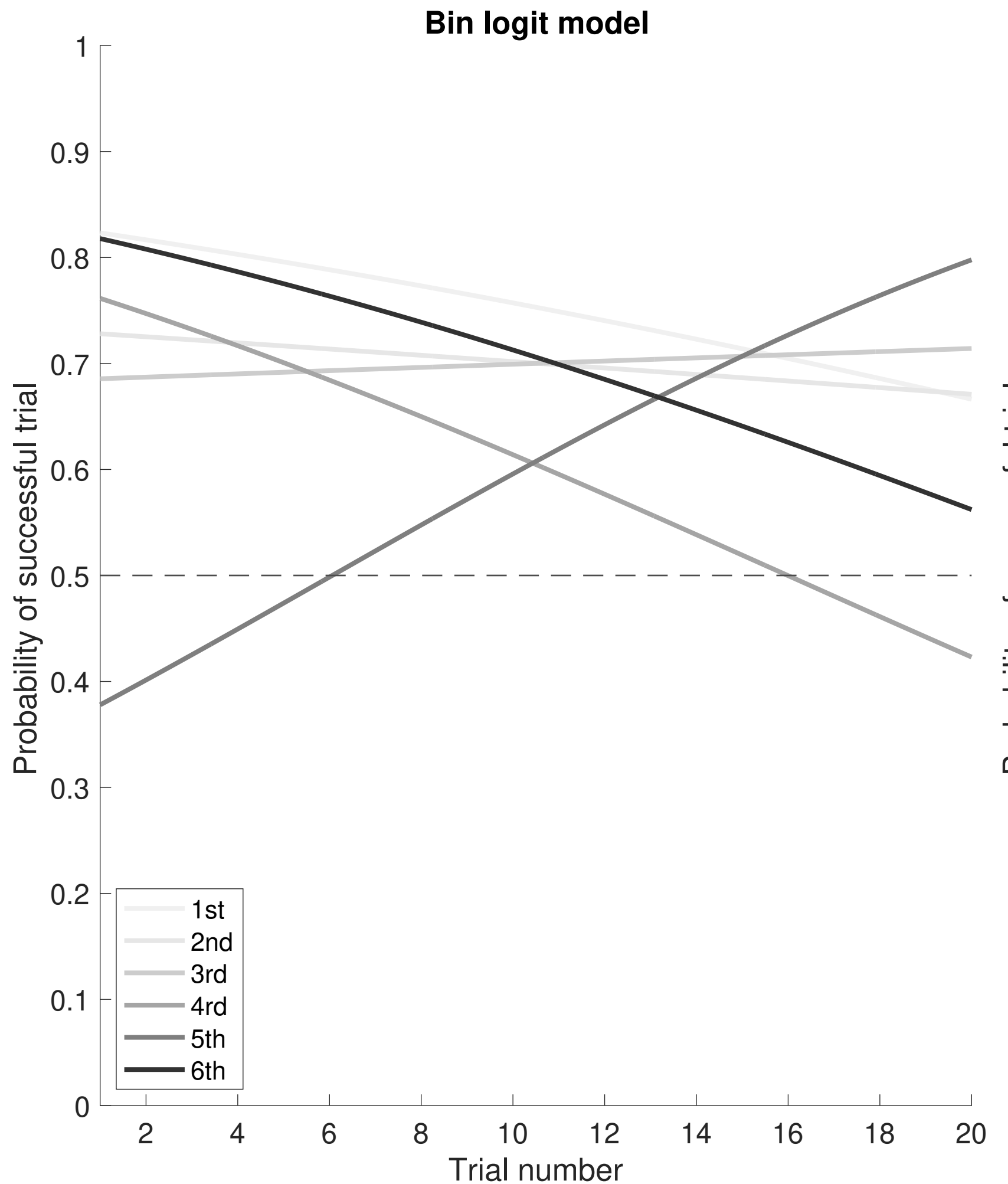
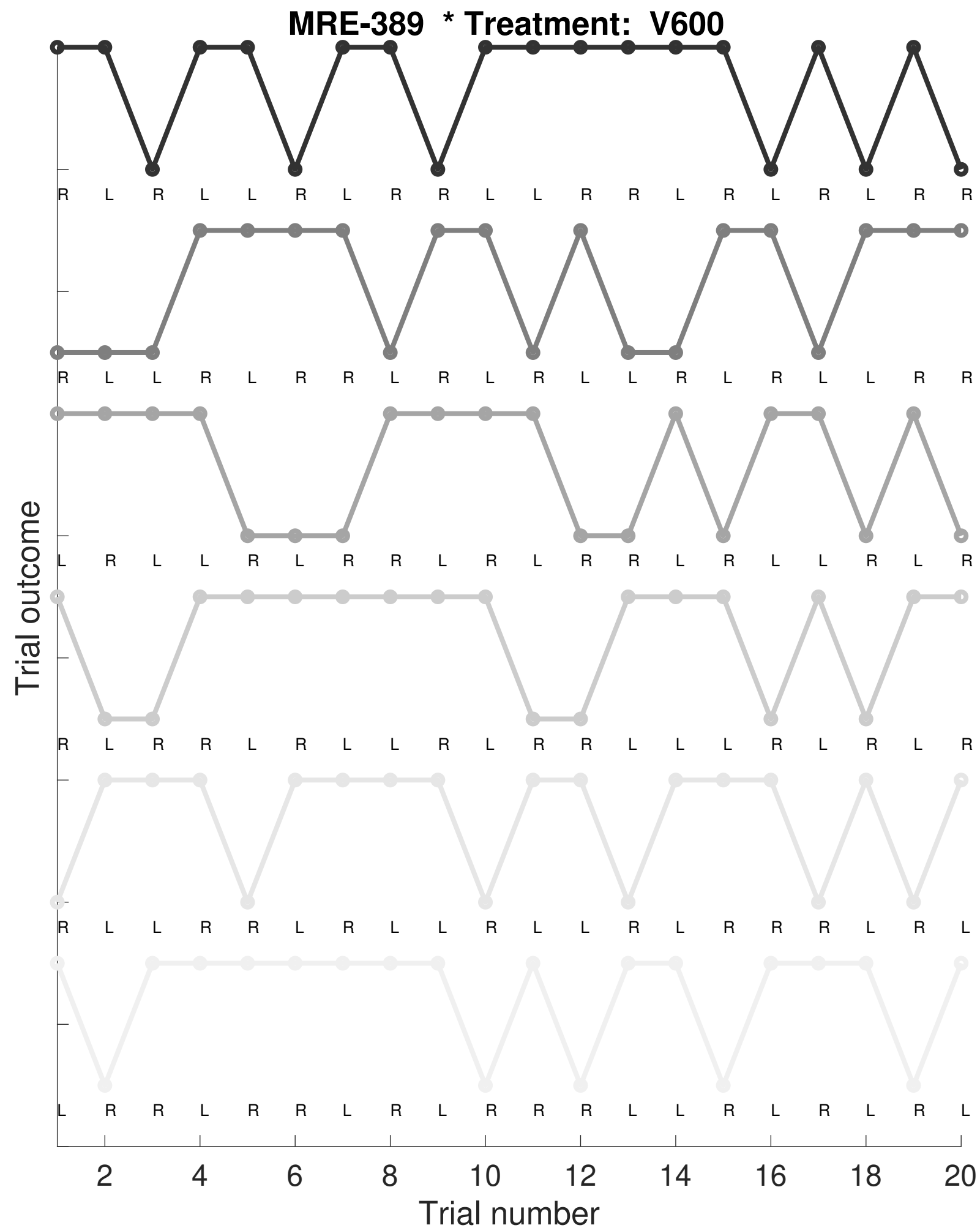
Bin logit model

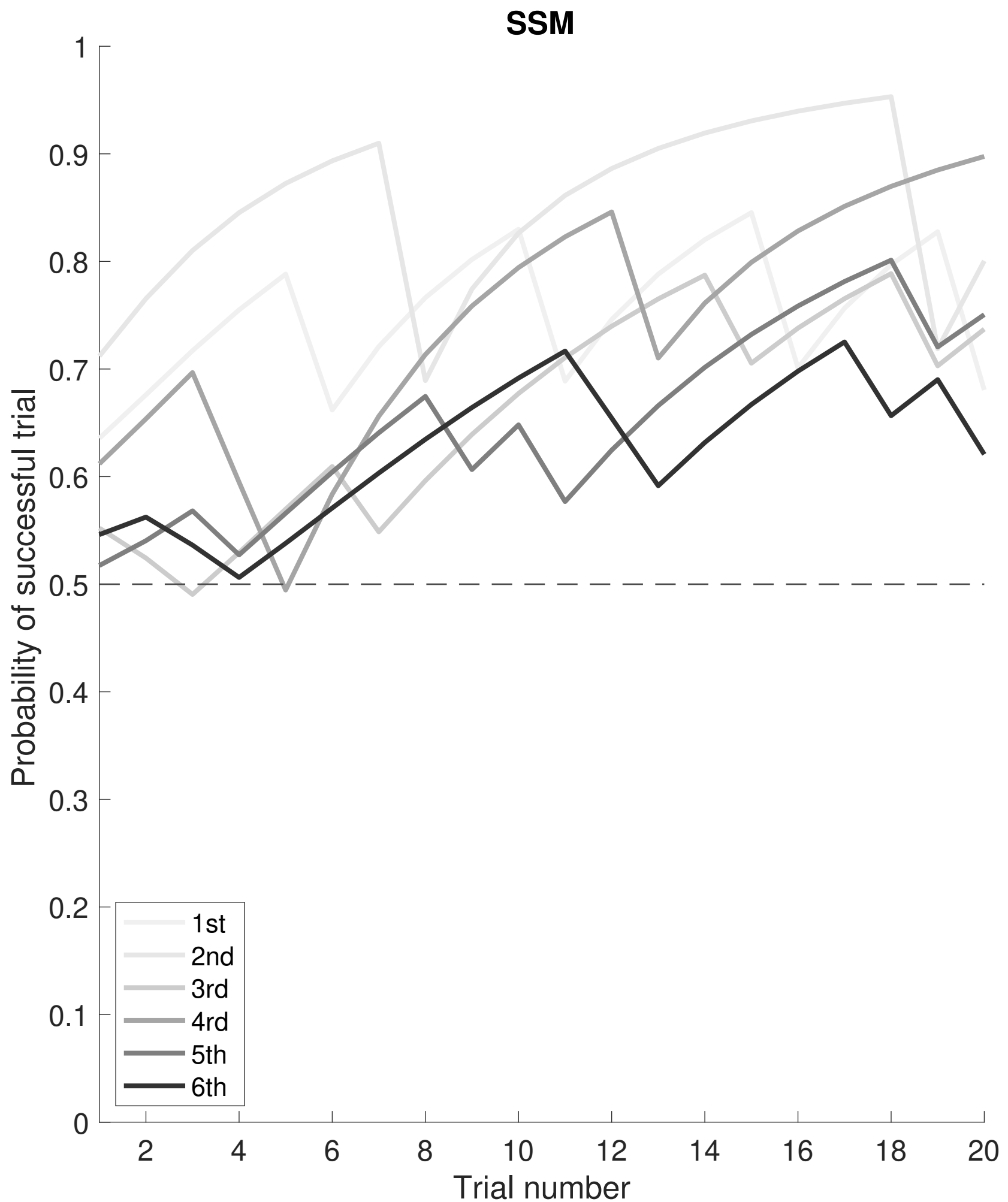
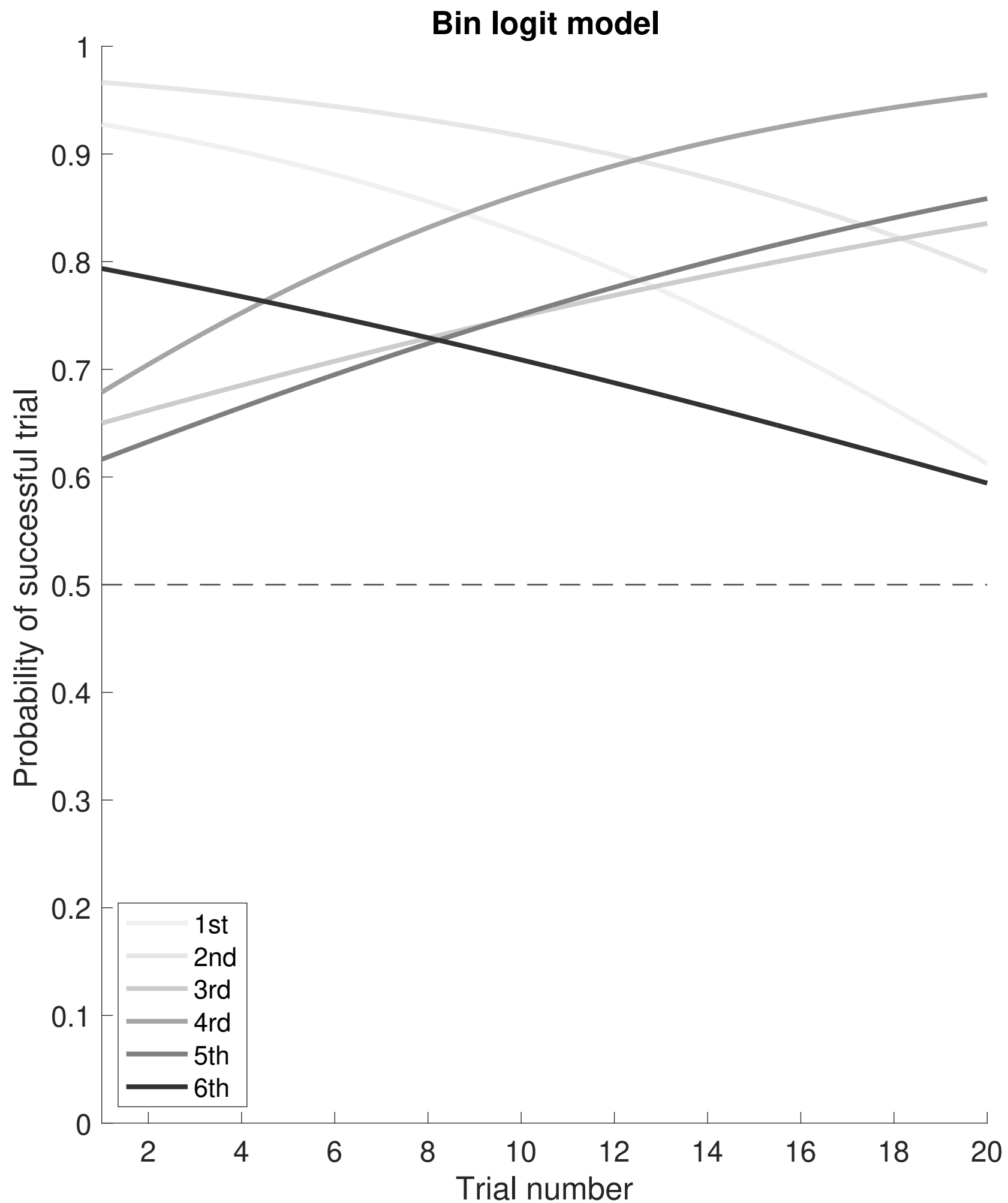
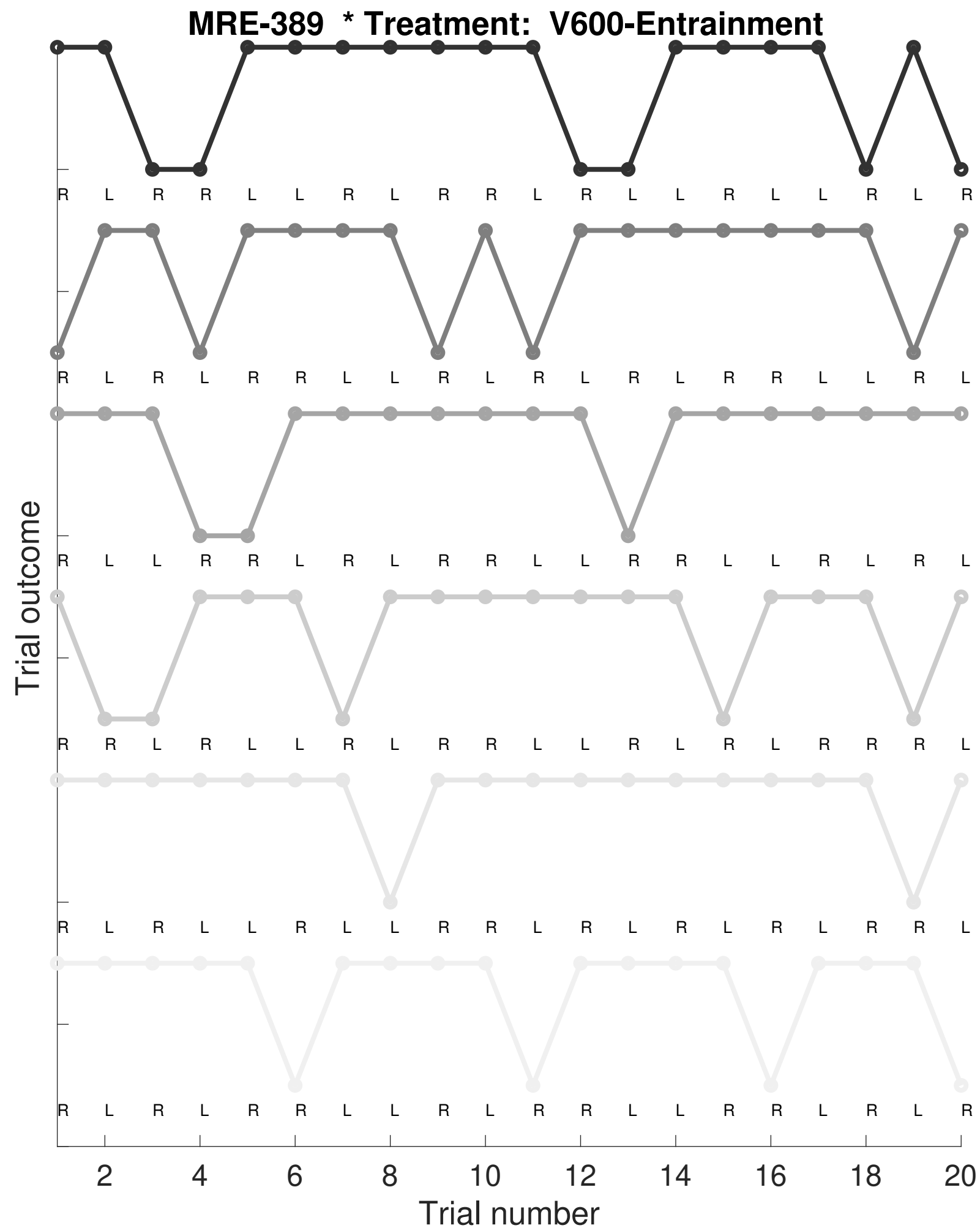


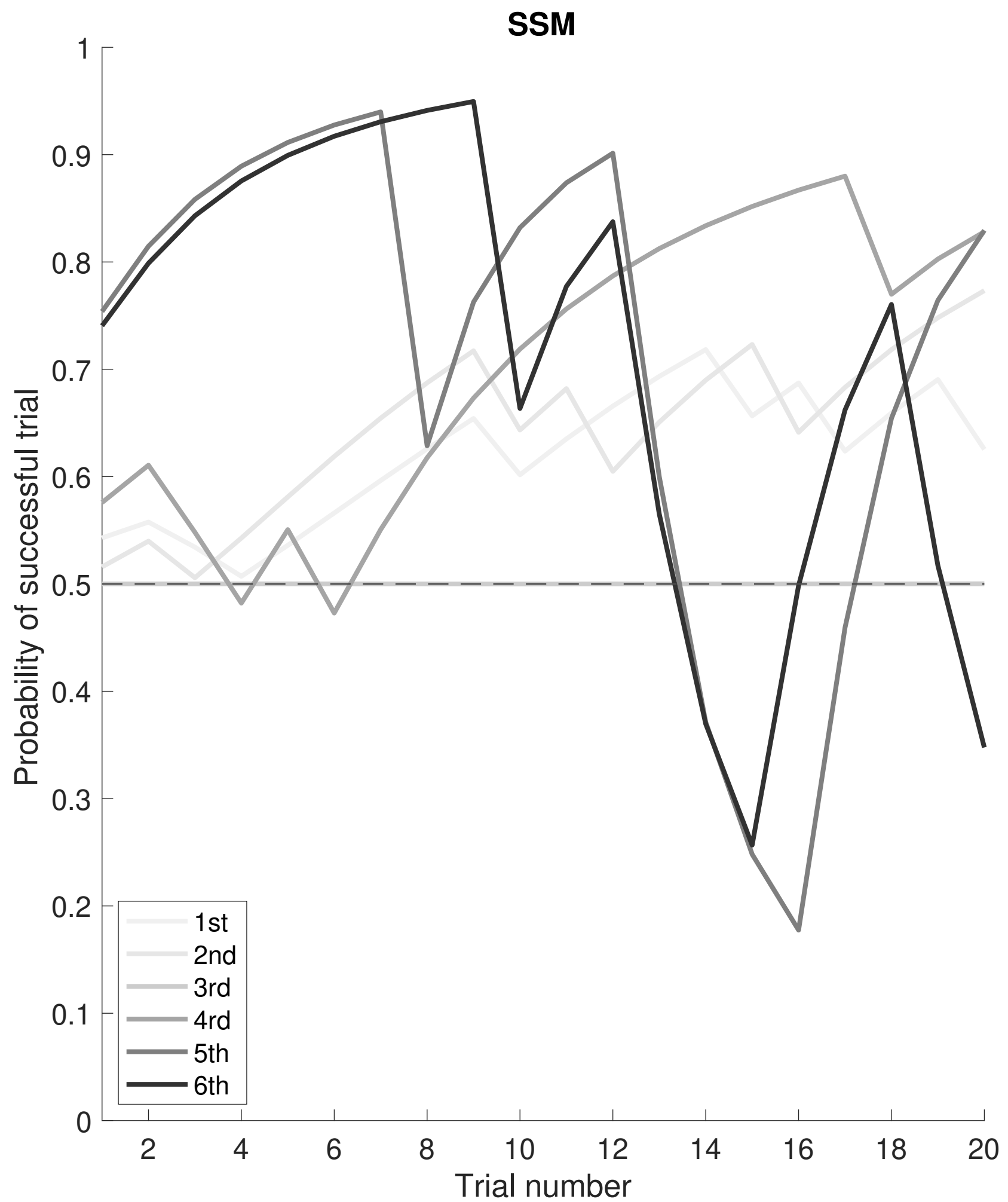
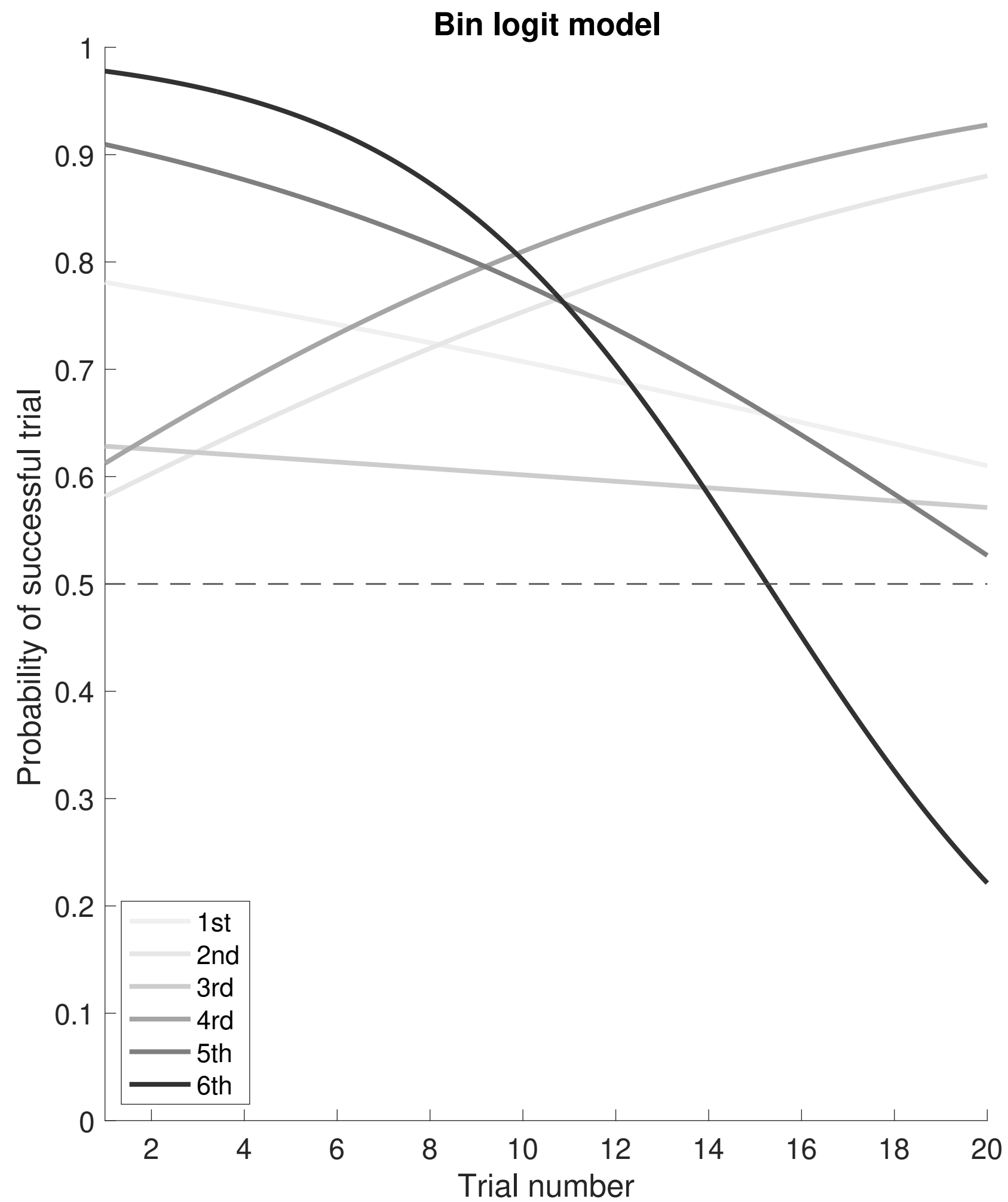
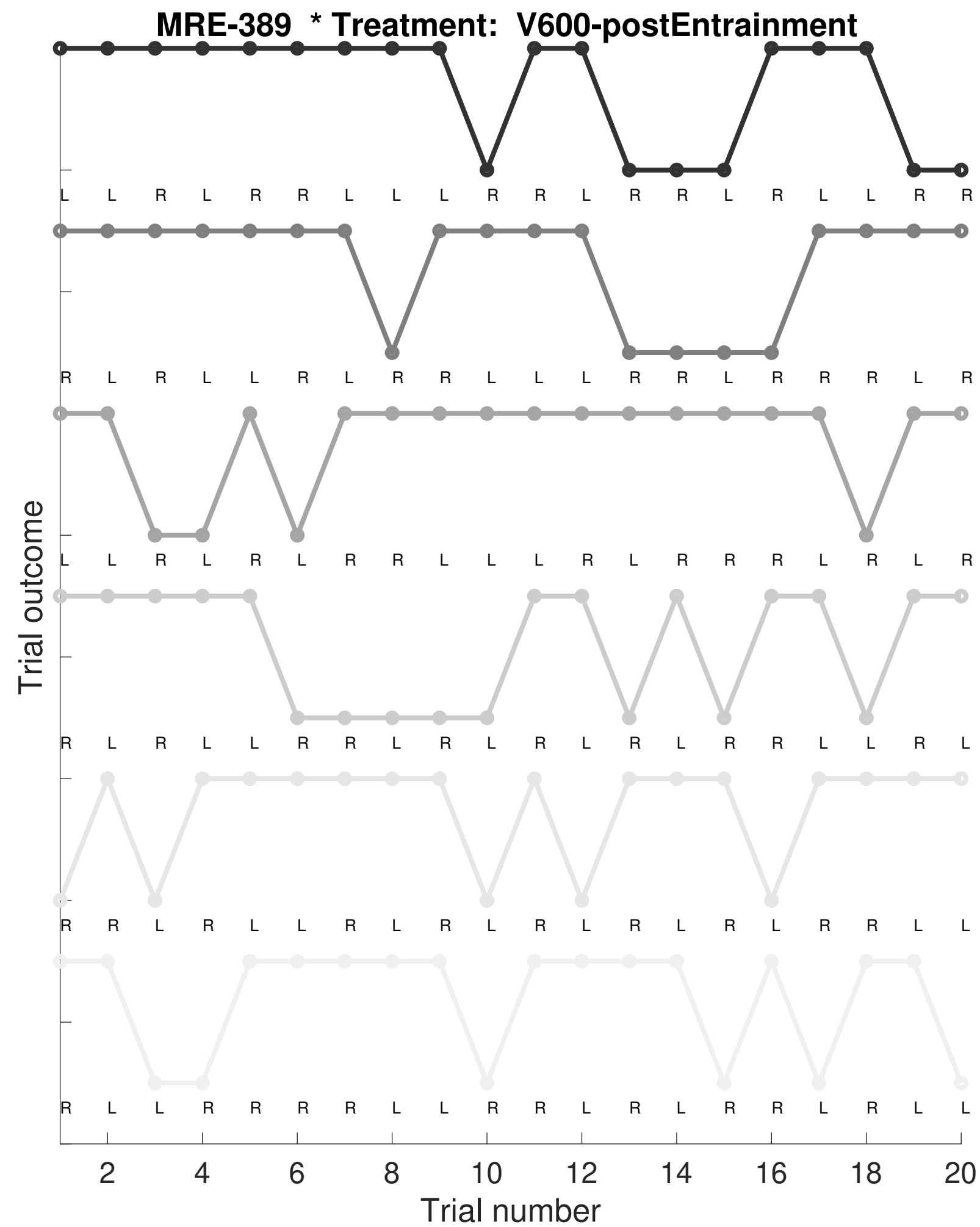
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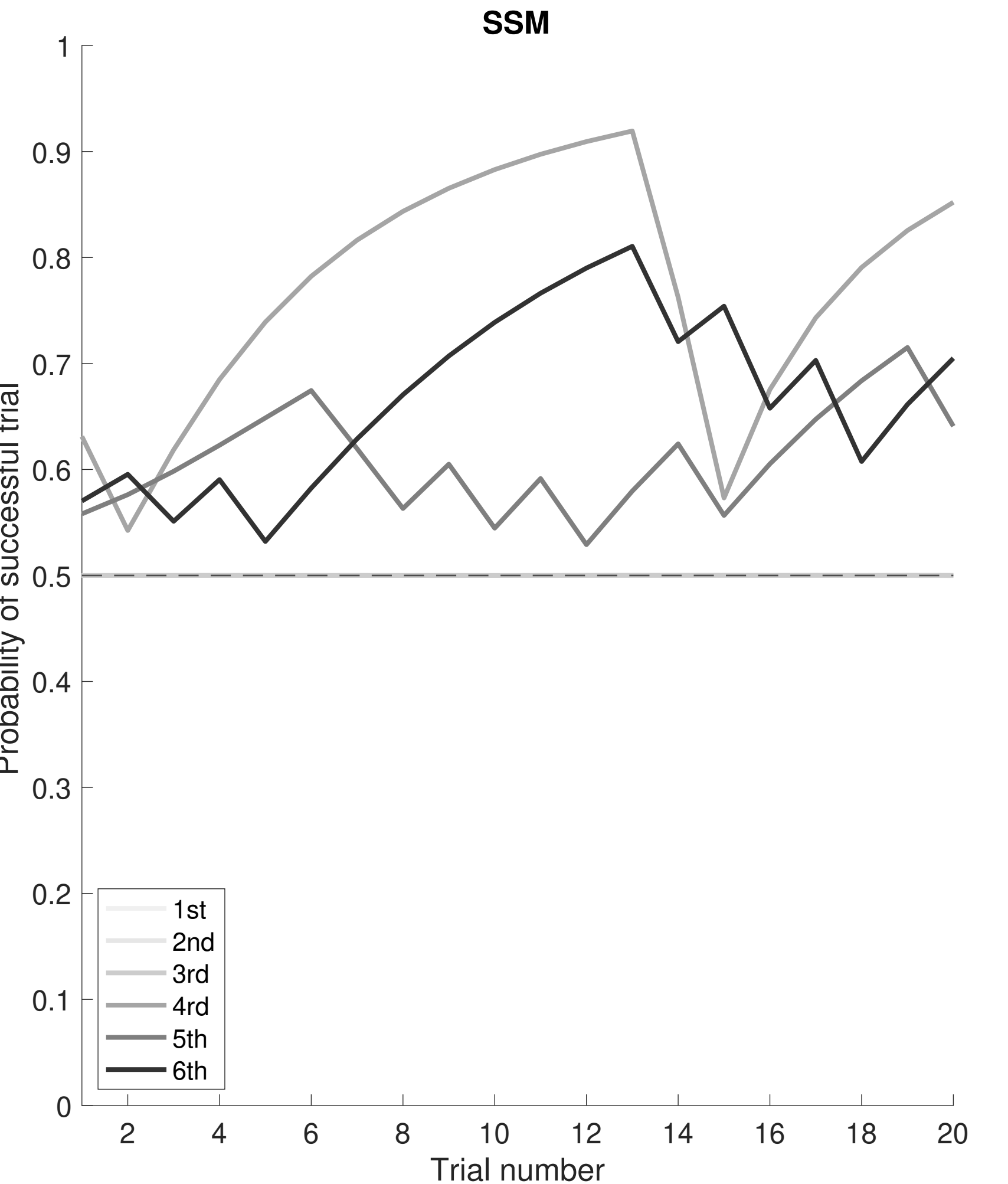
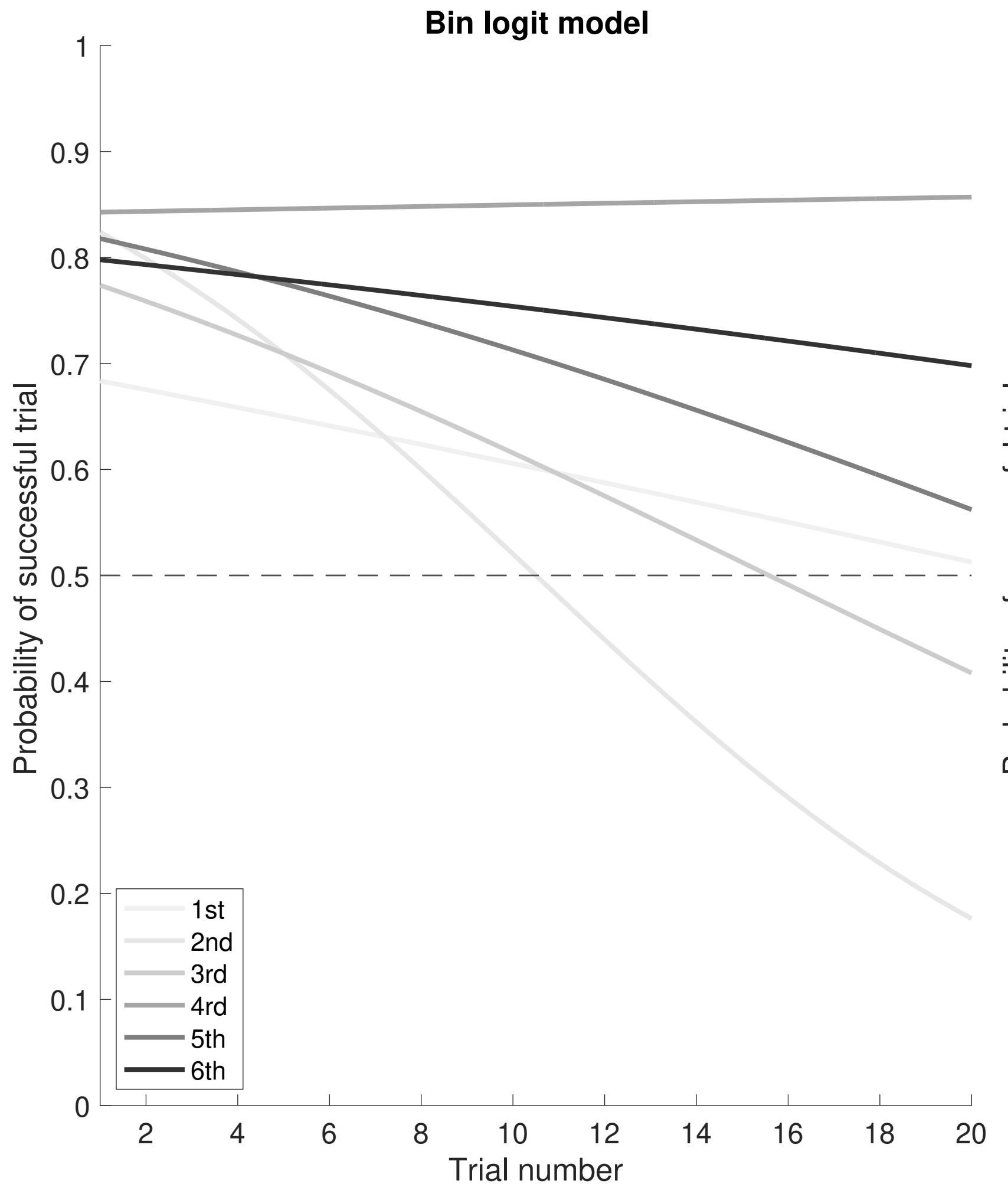
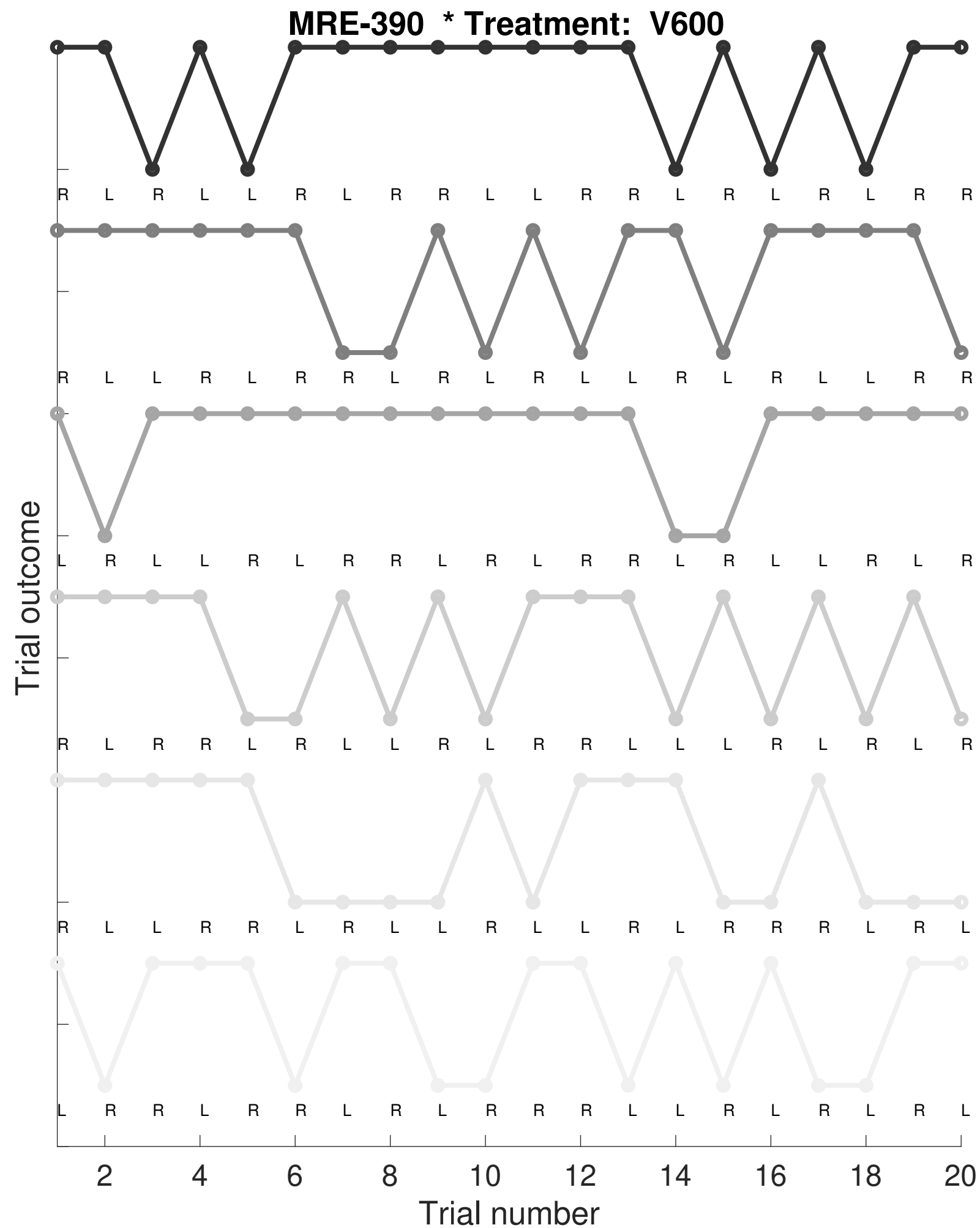


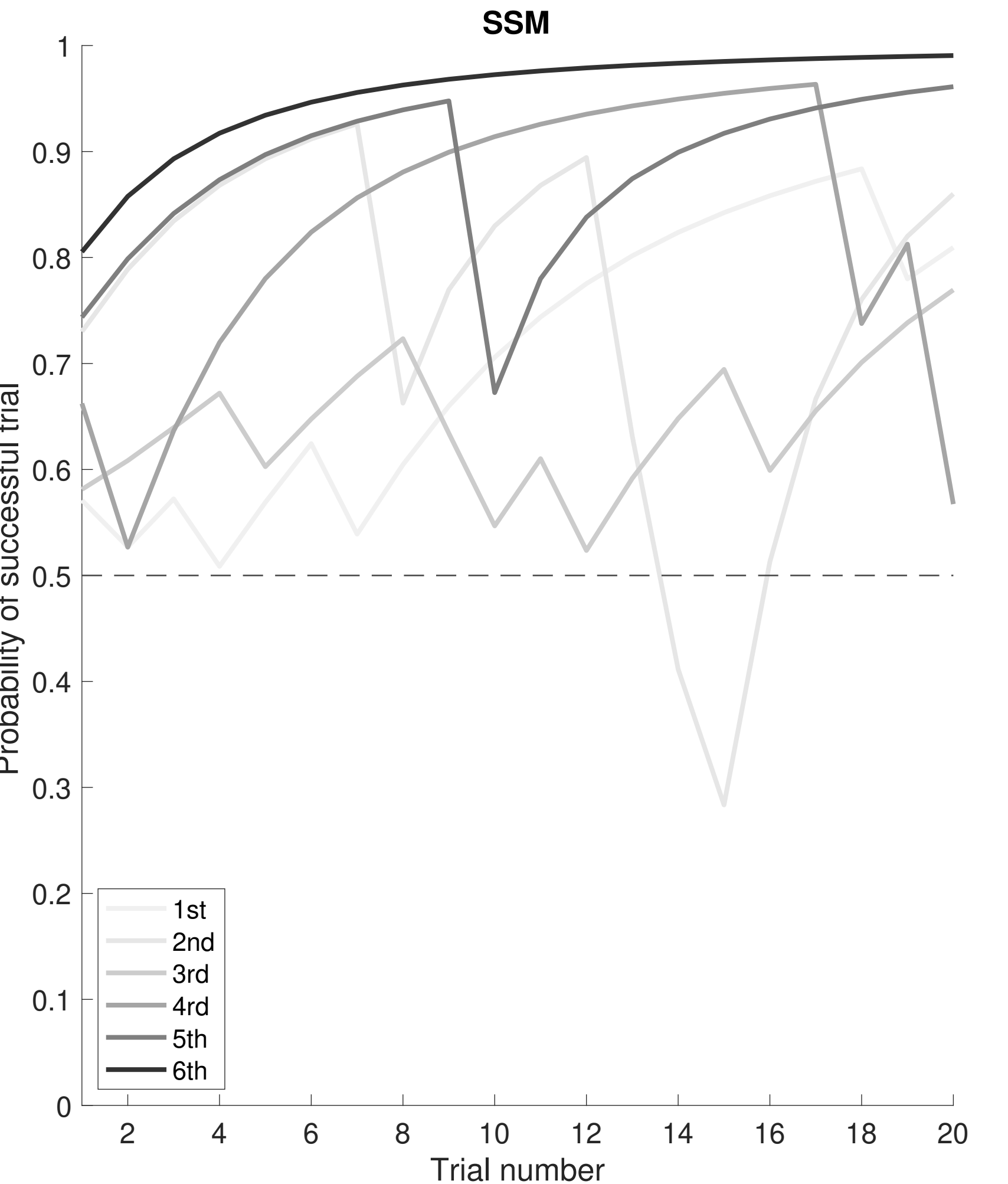
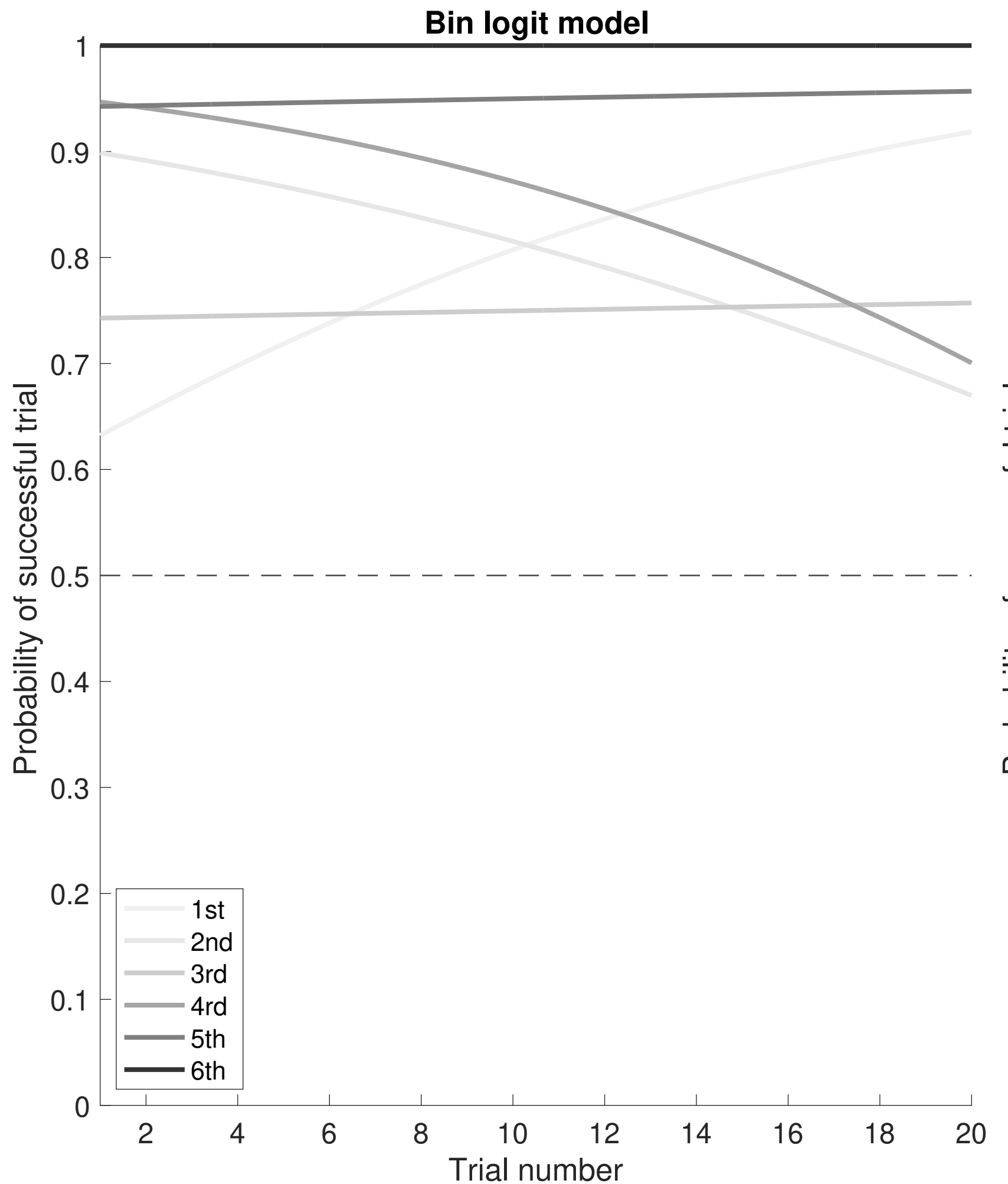
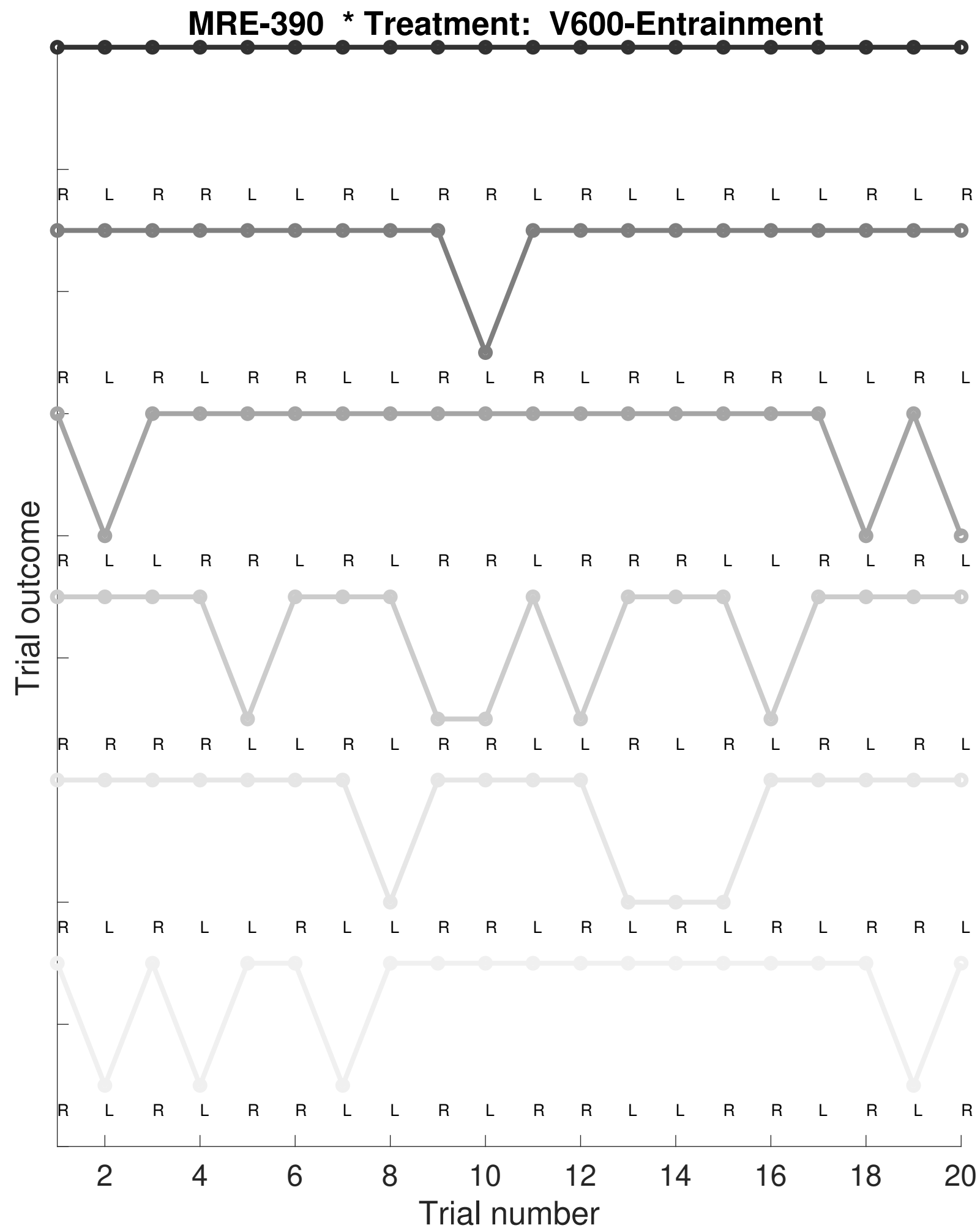


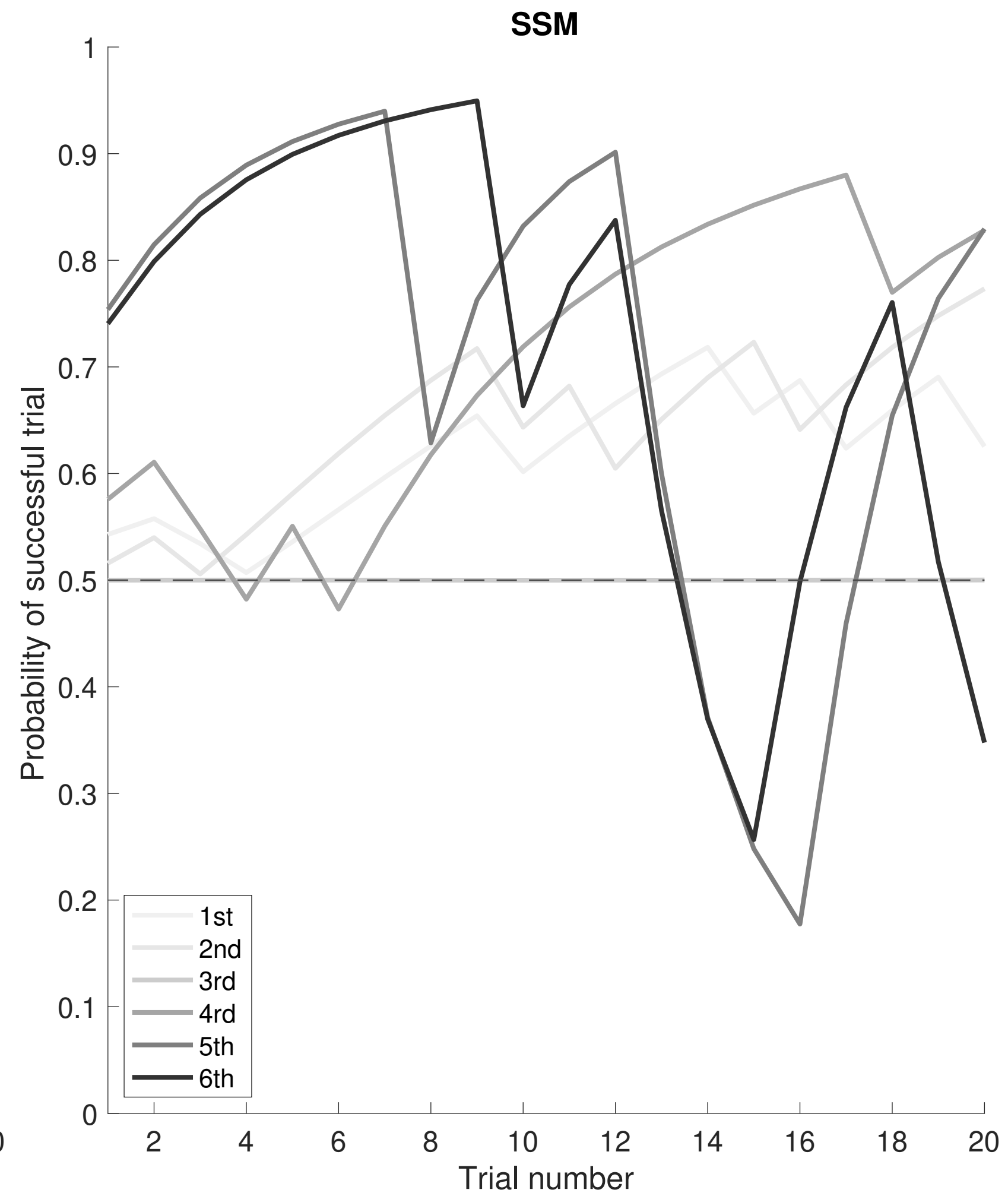
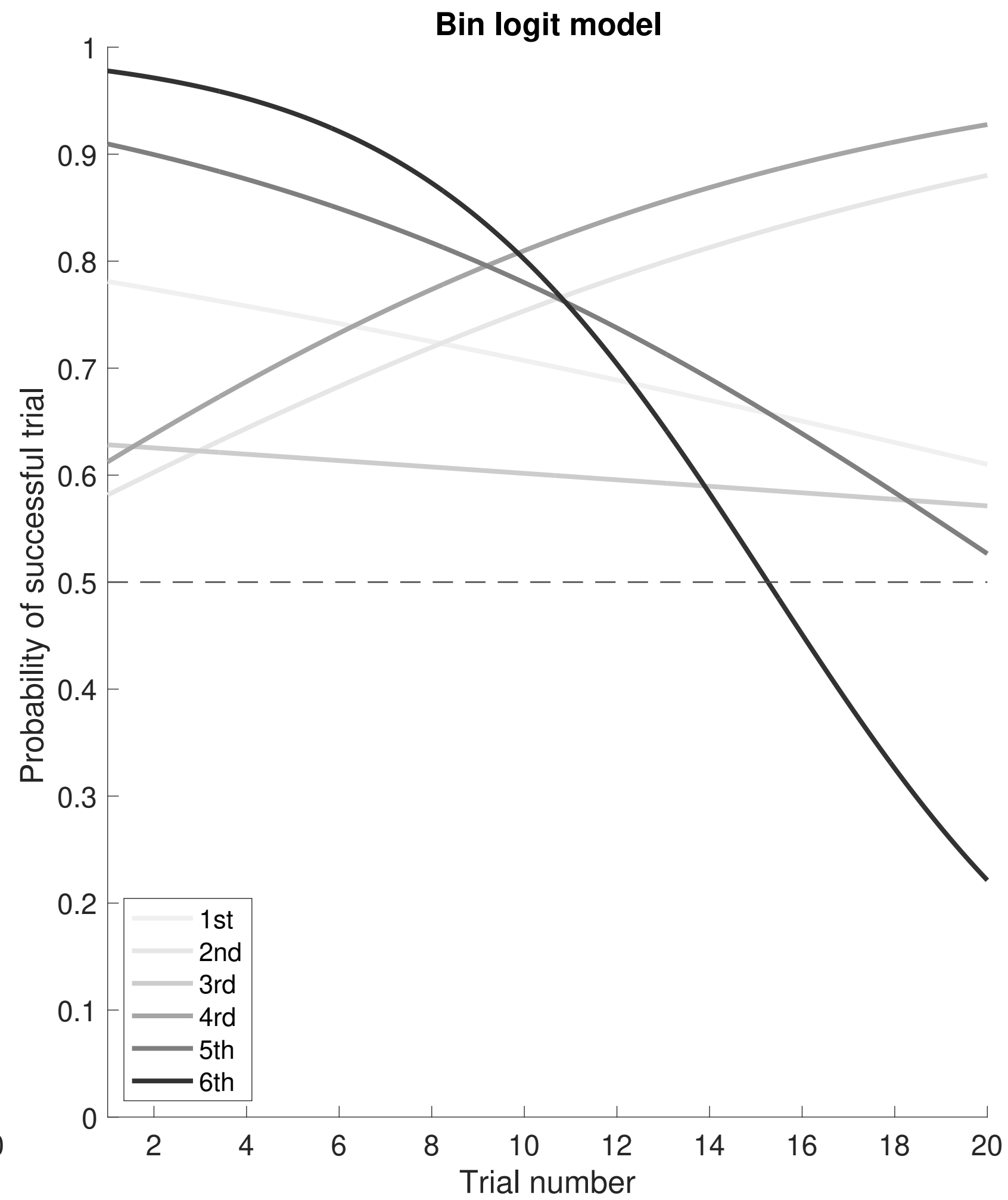
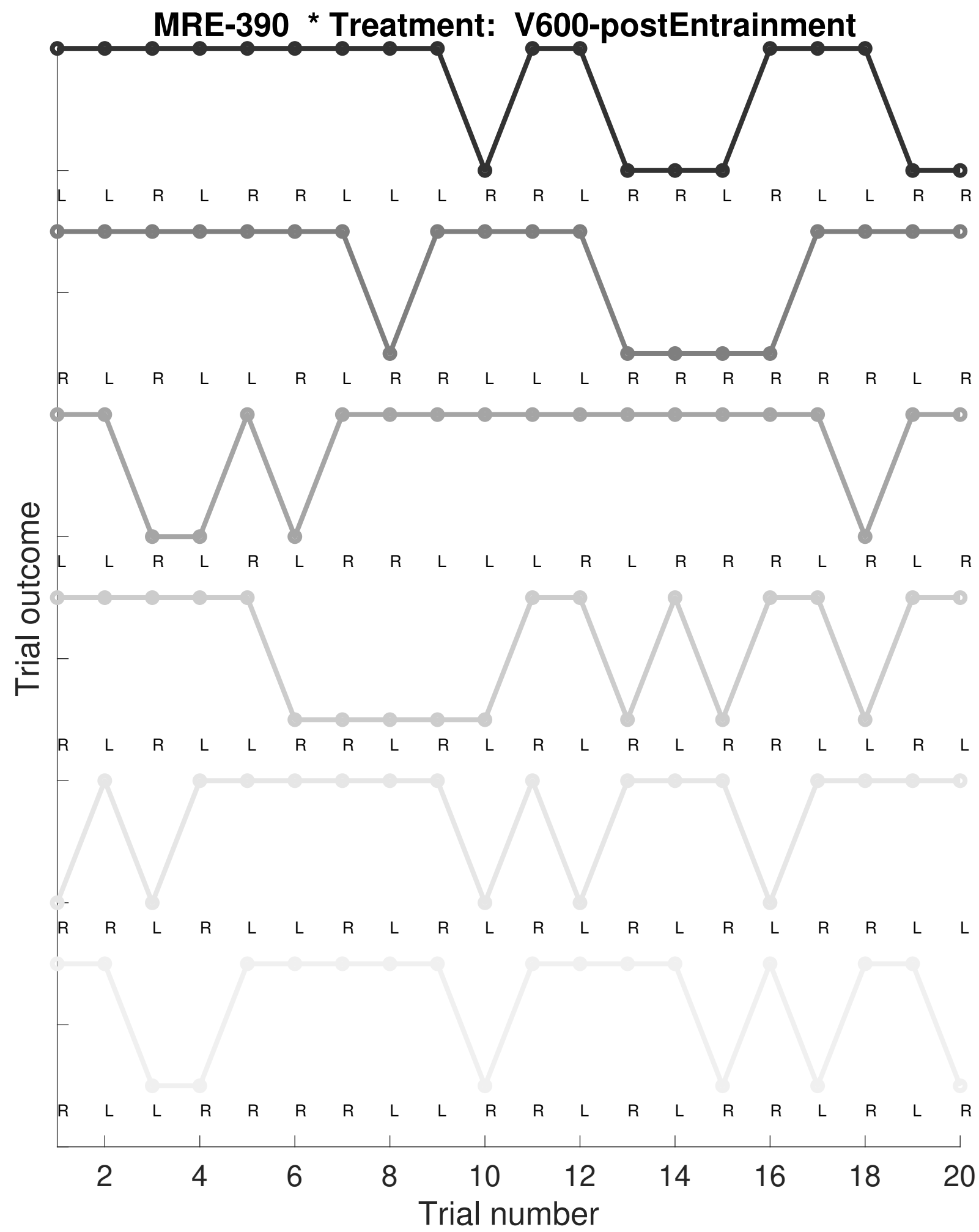


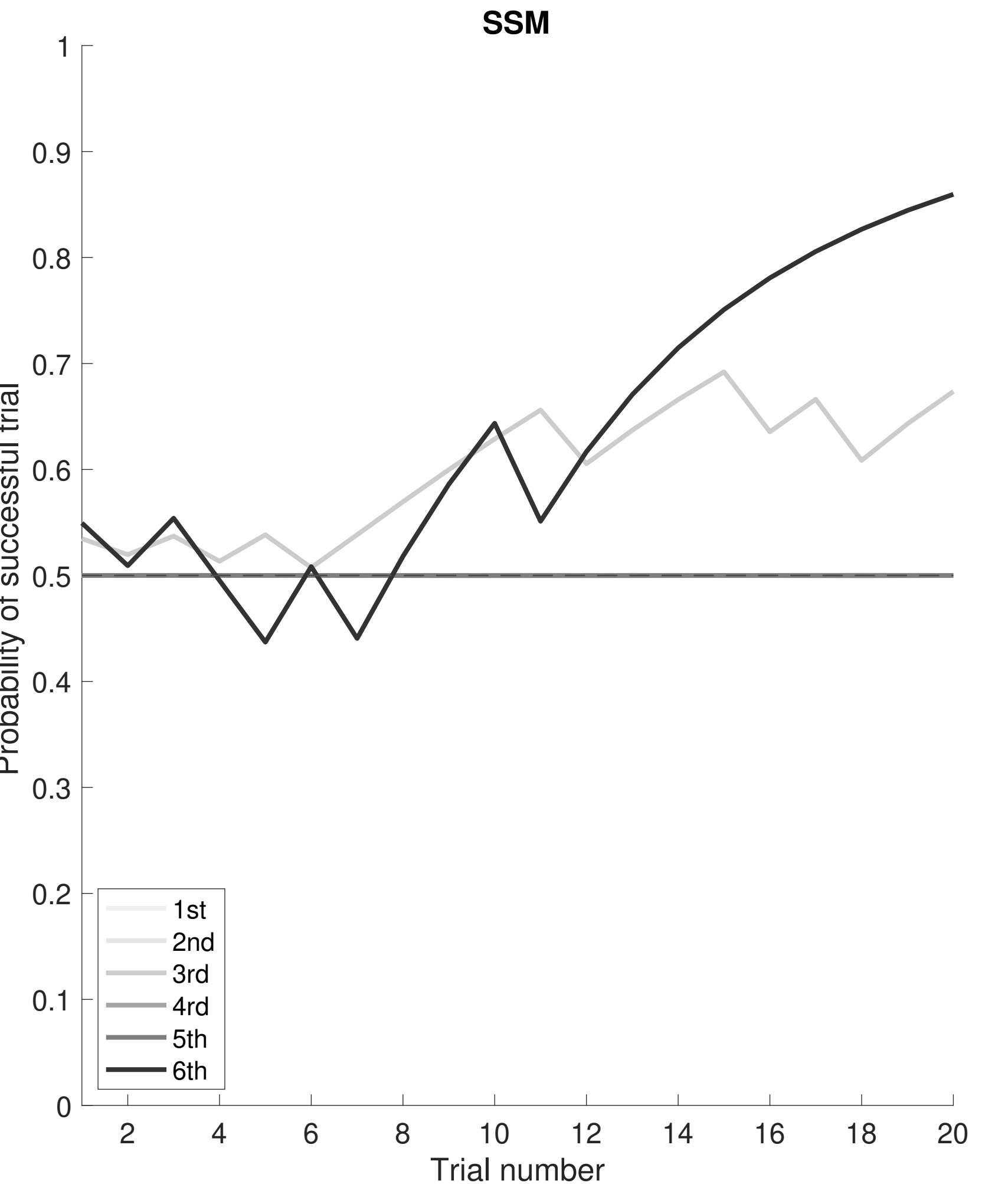
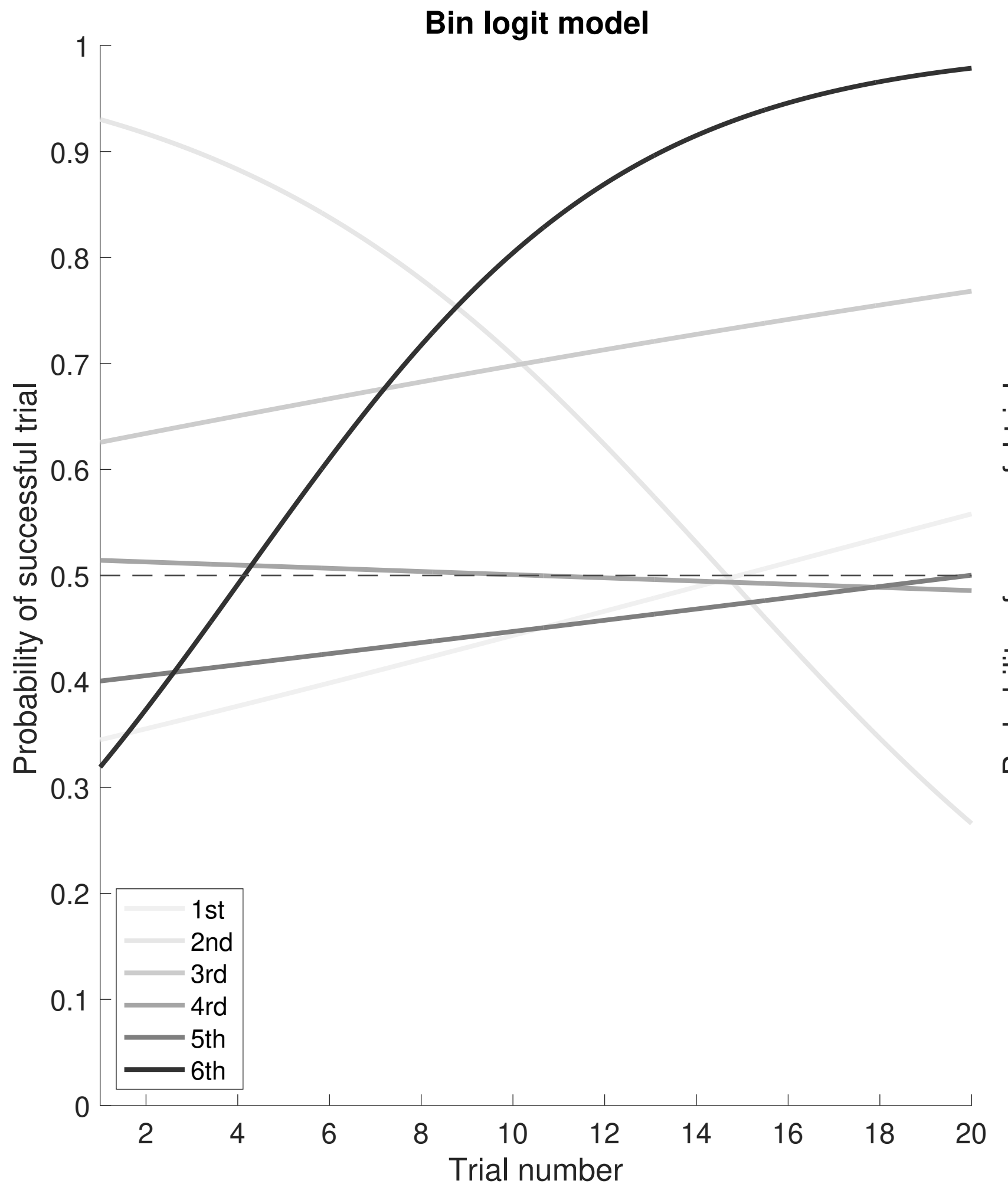
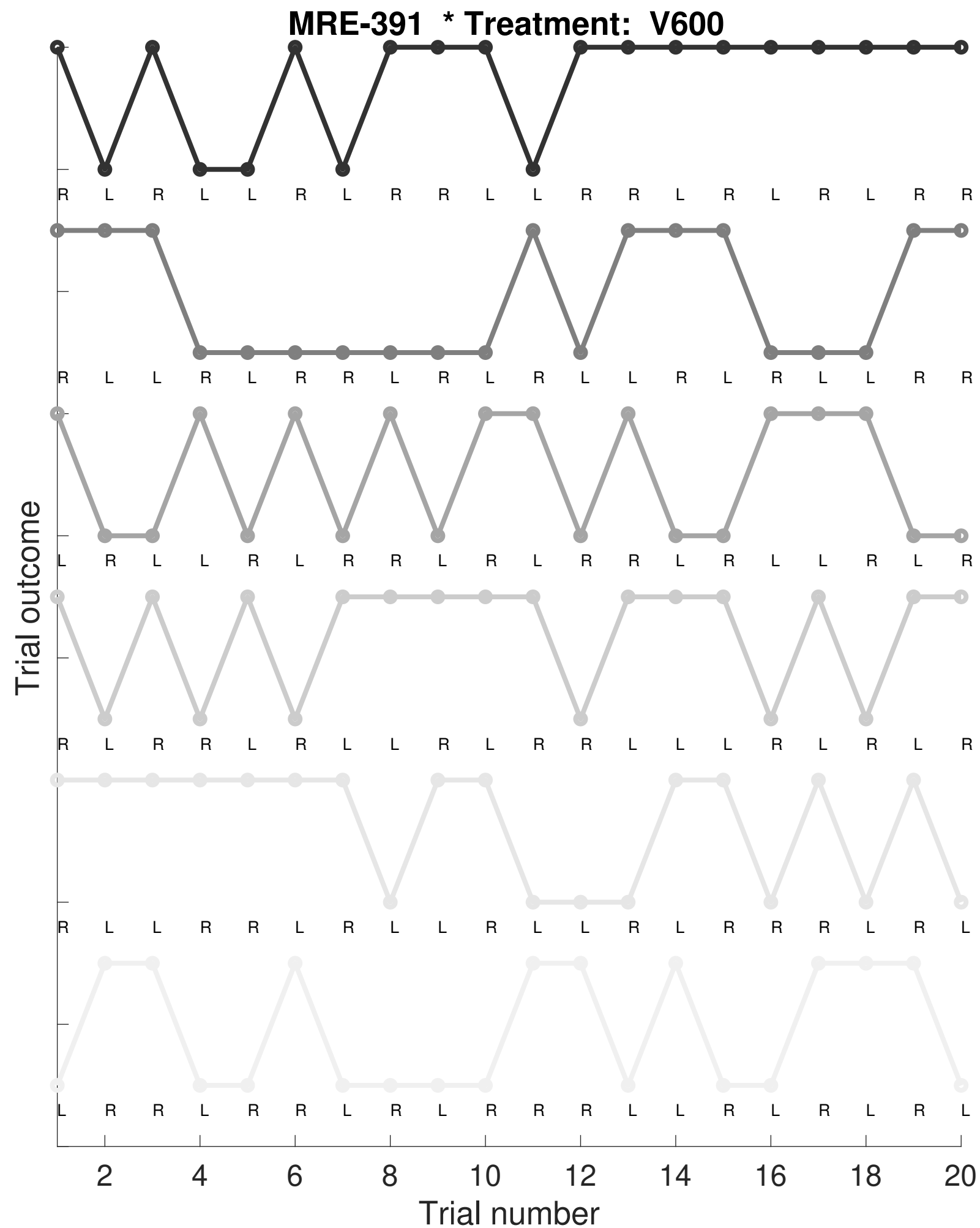


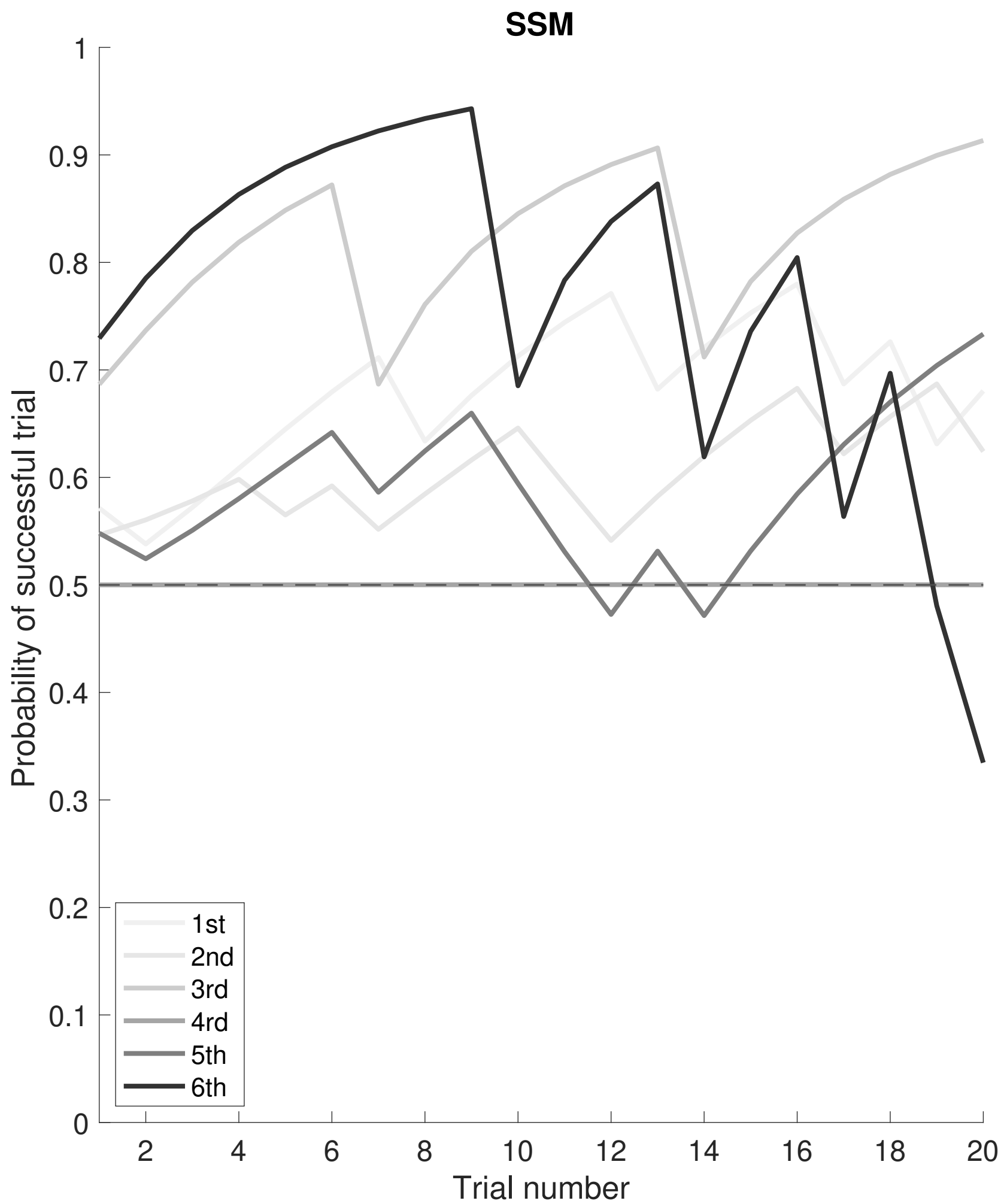
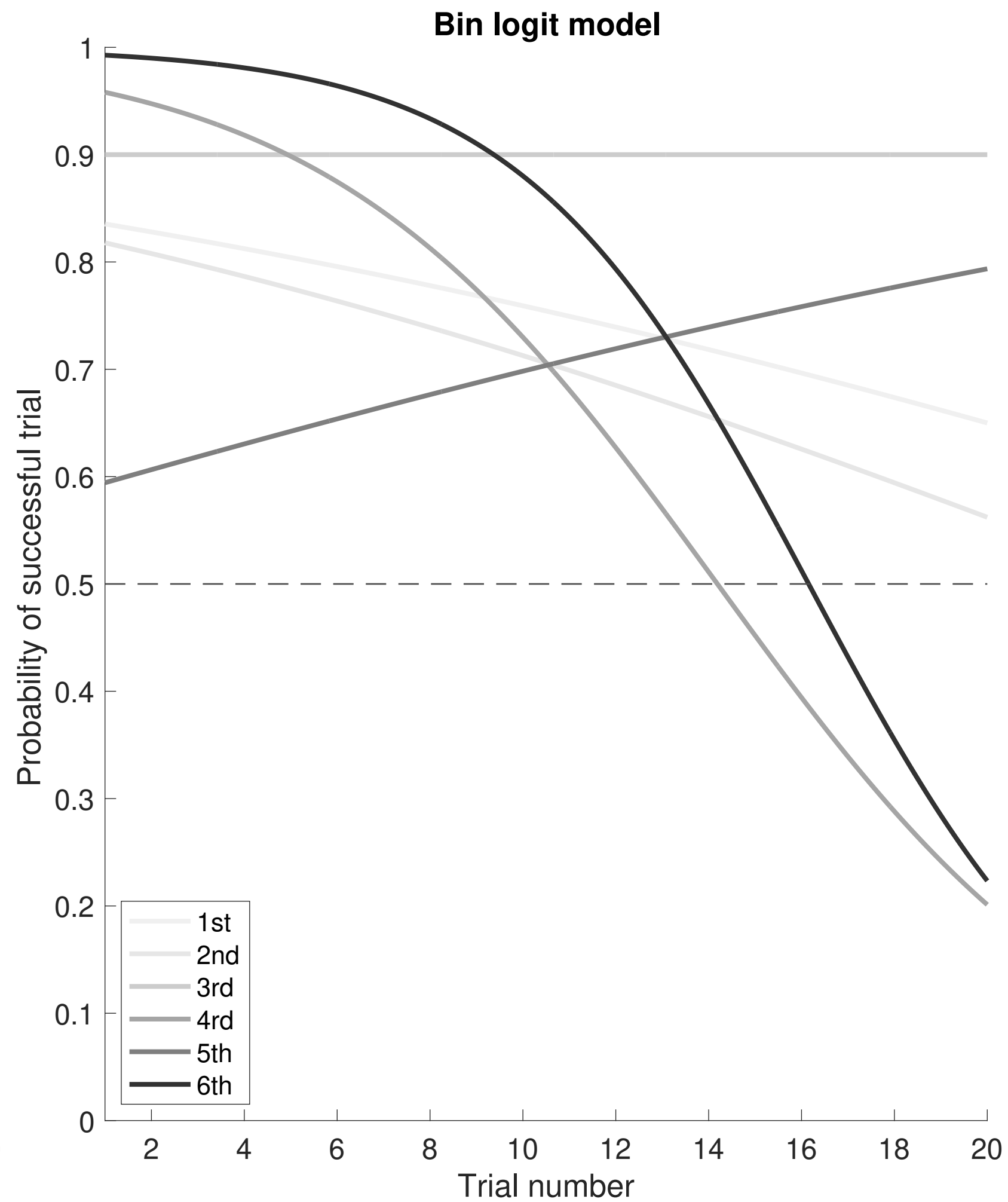
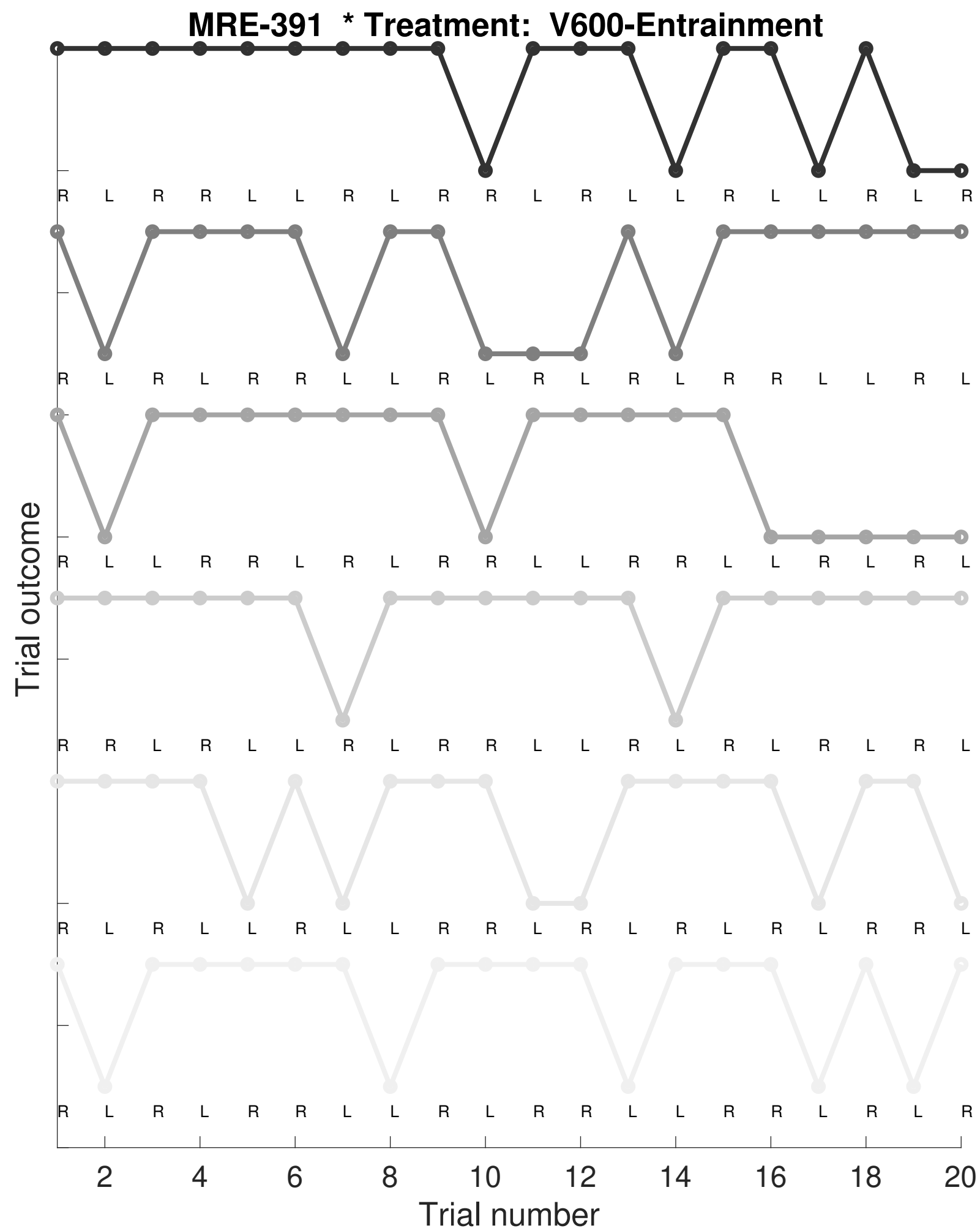


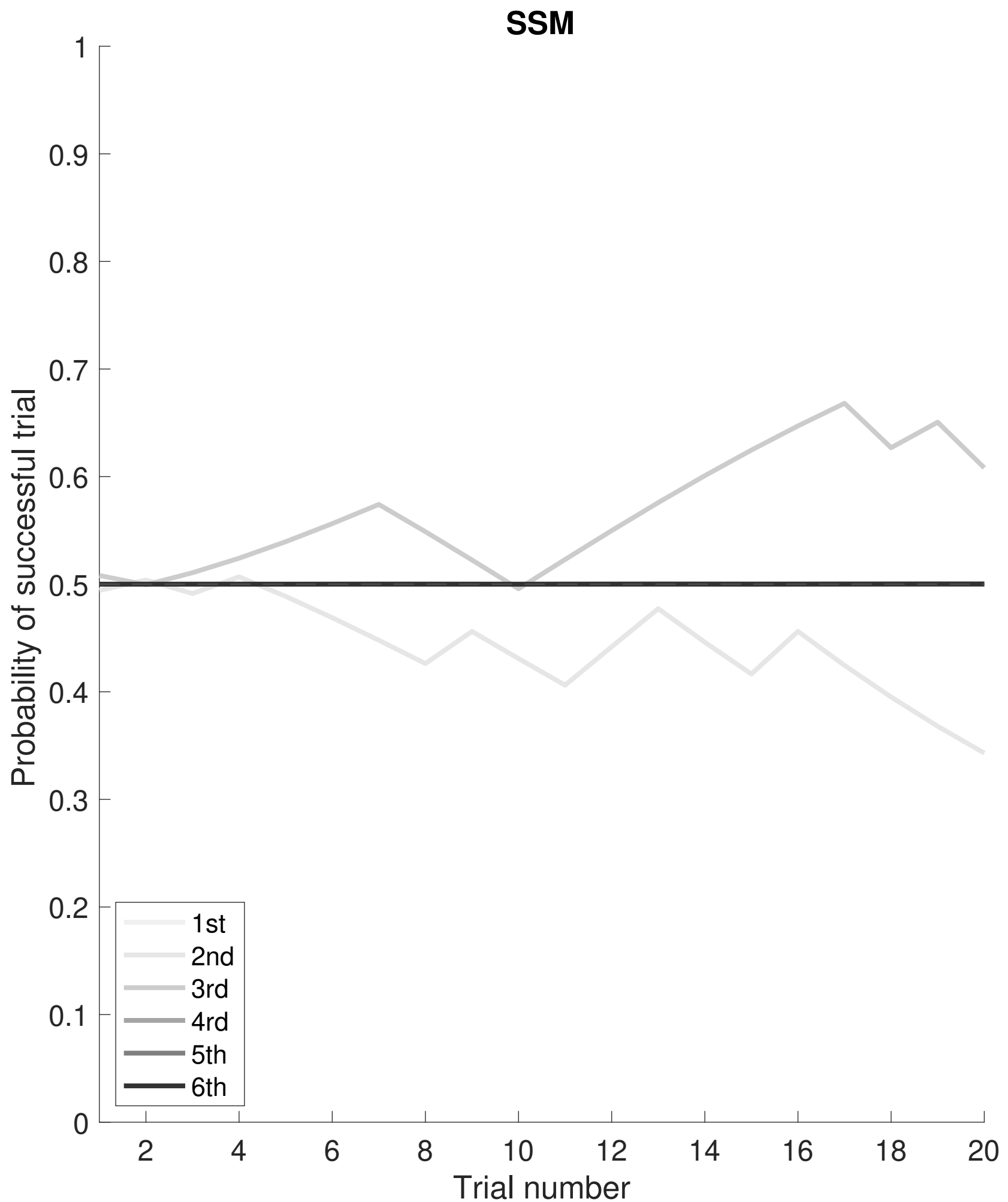
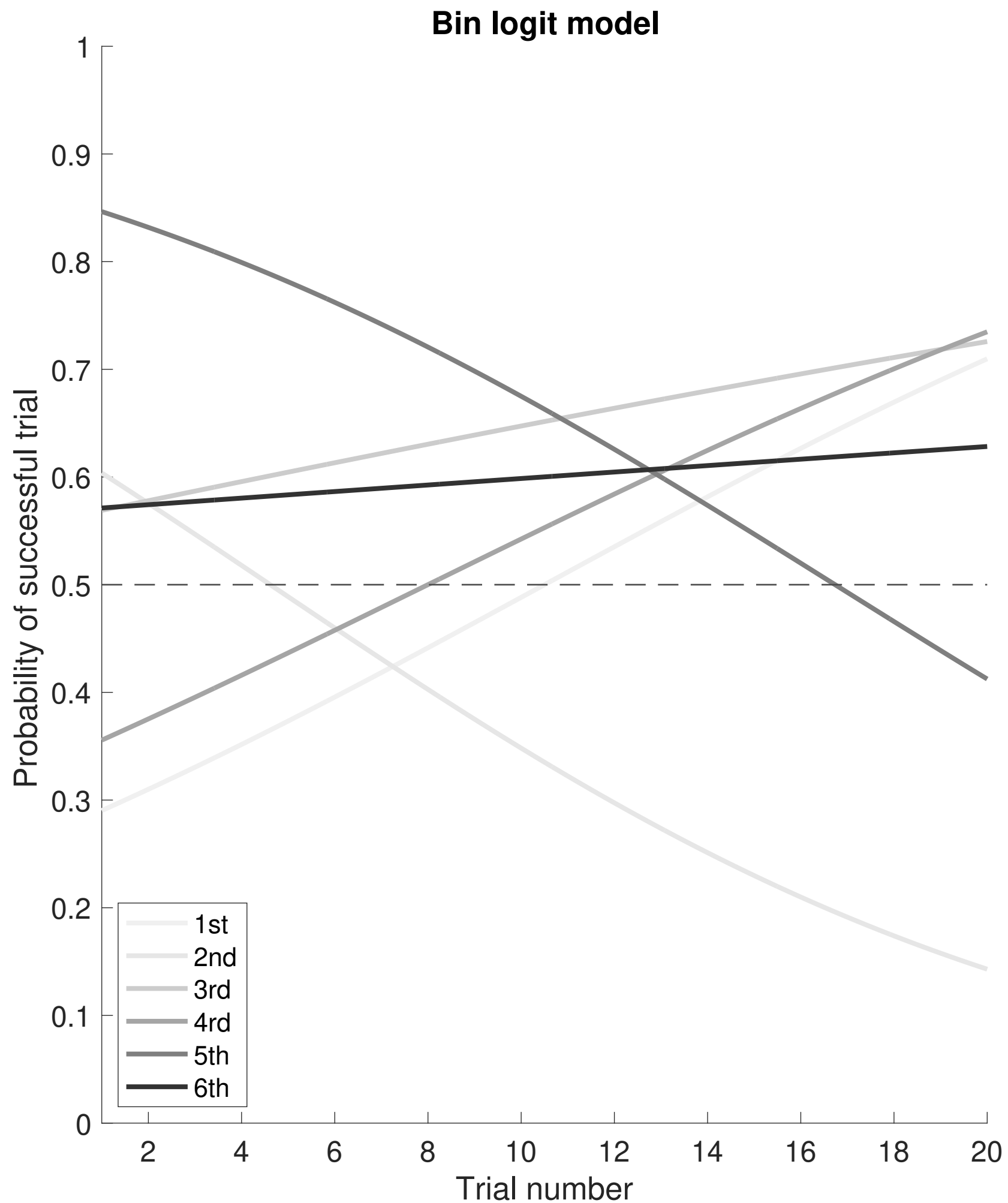
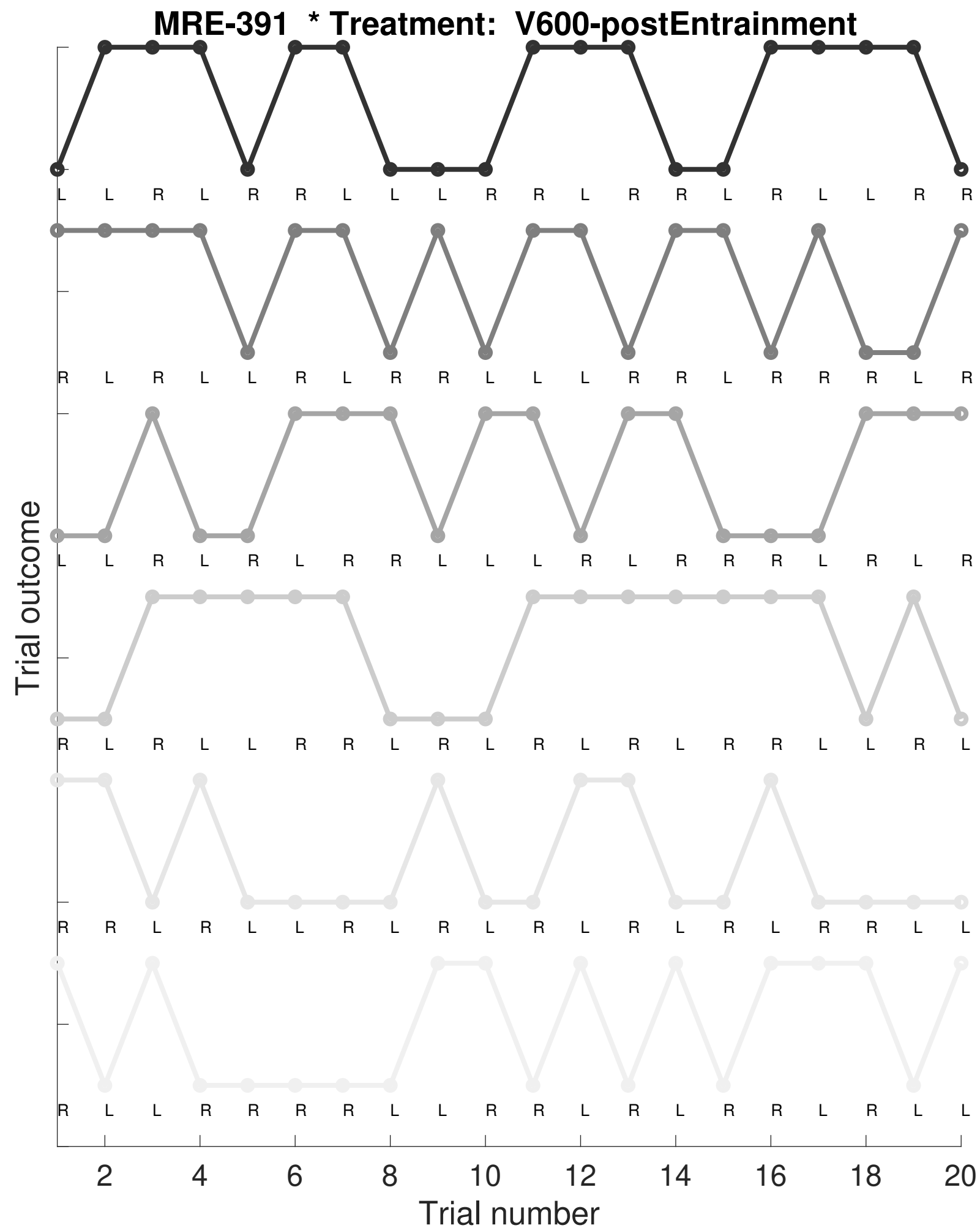


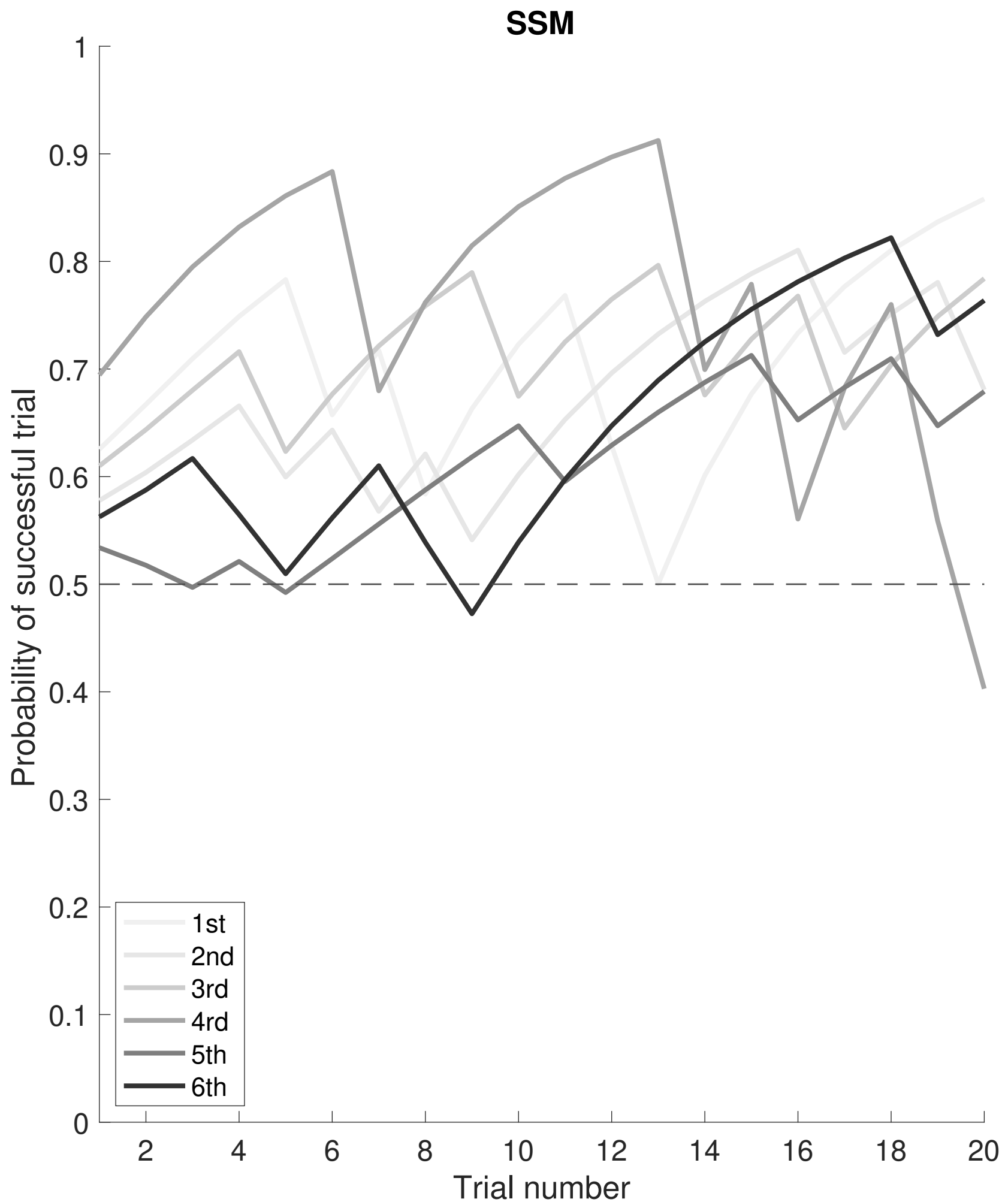
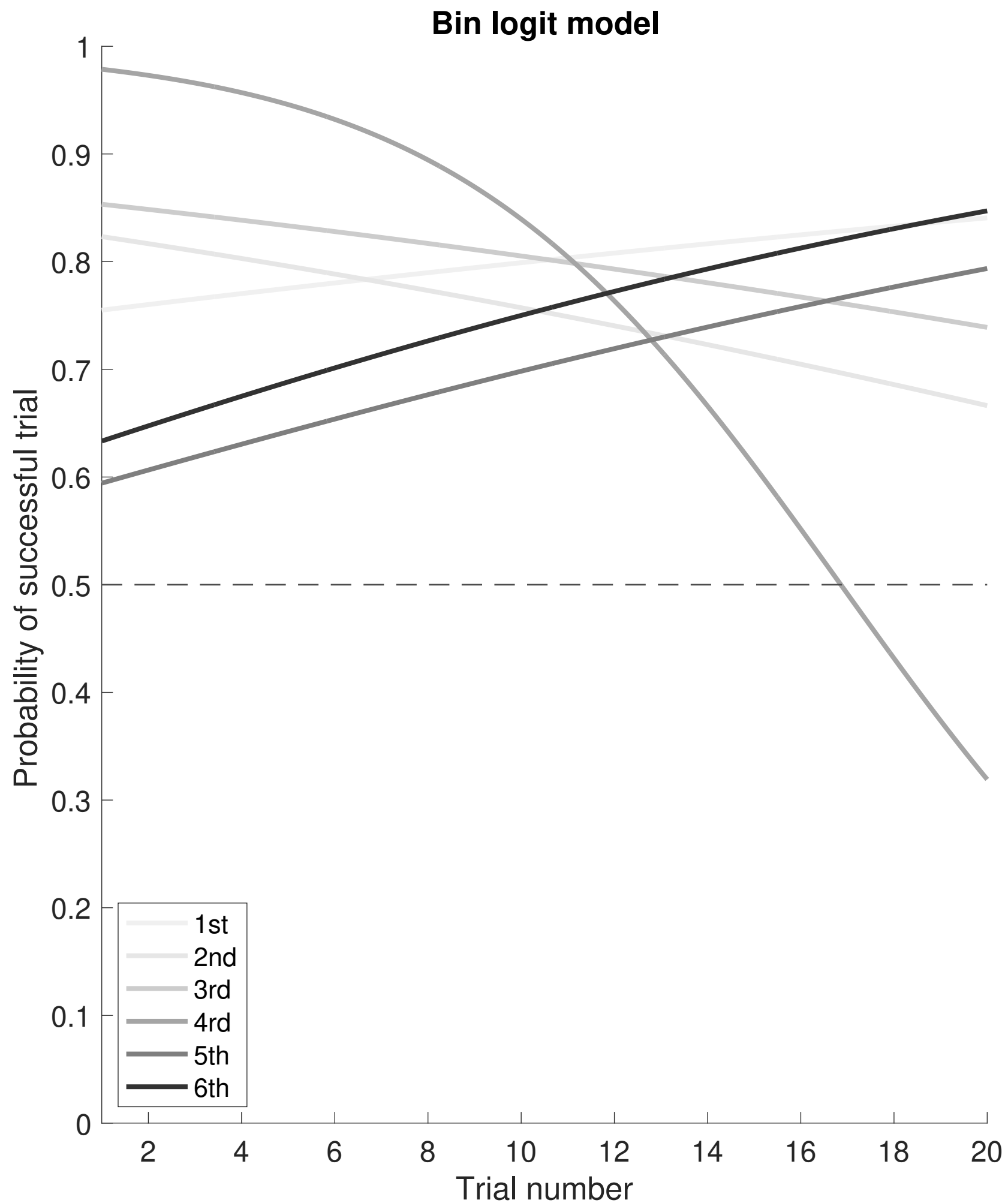
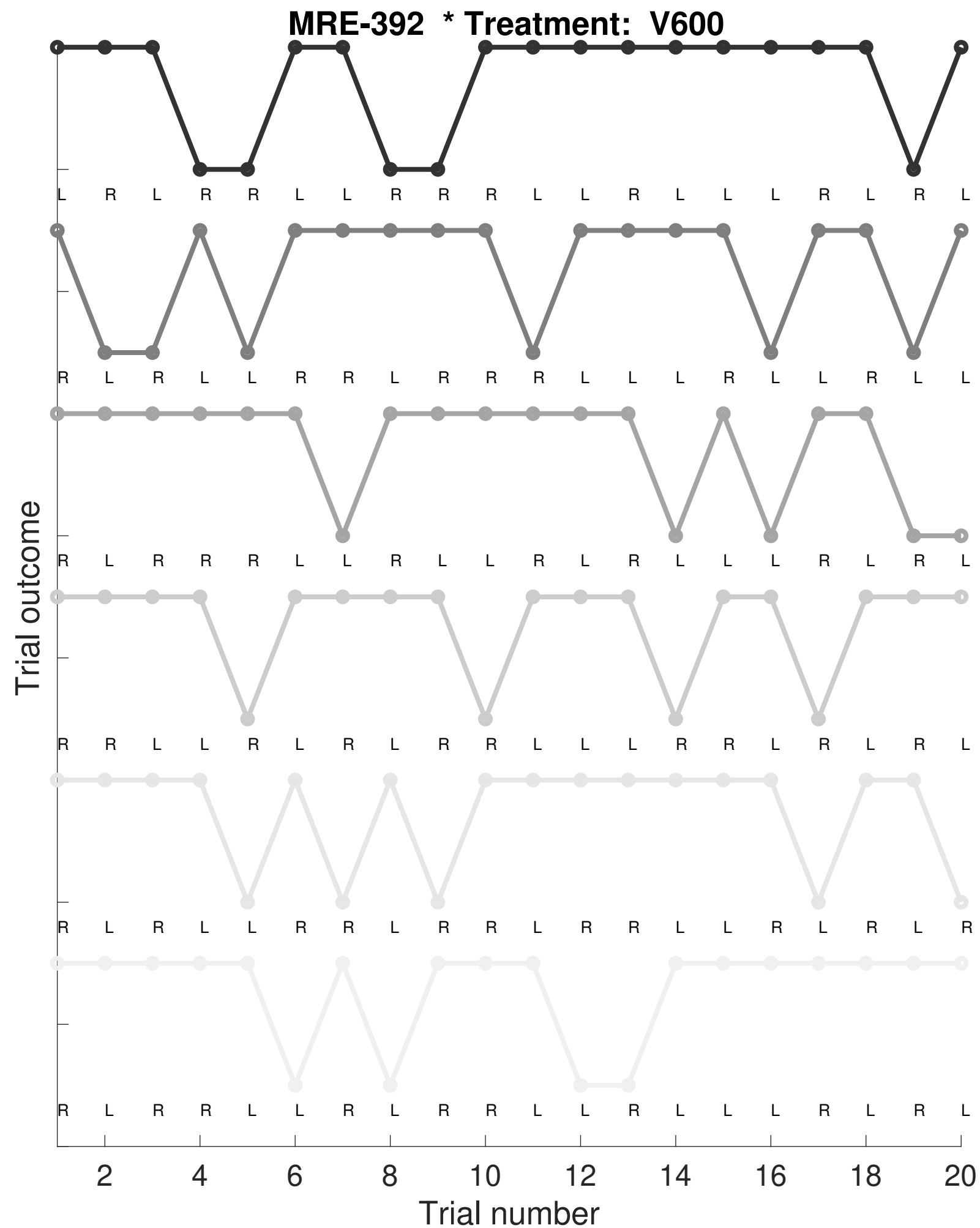


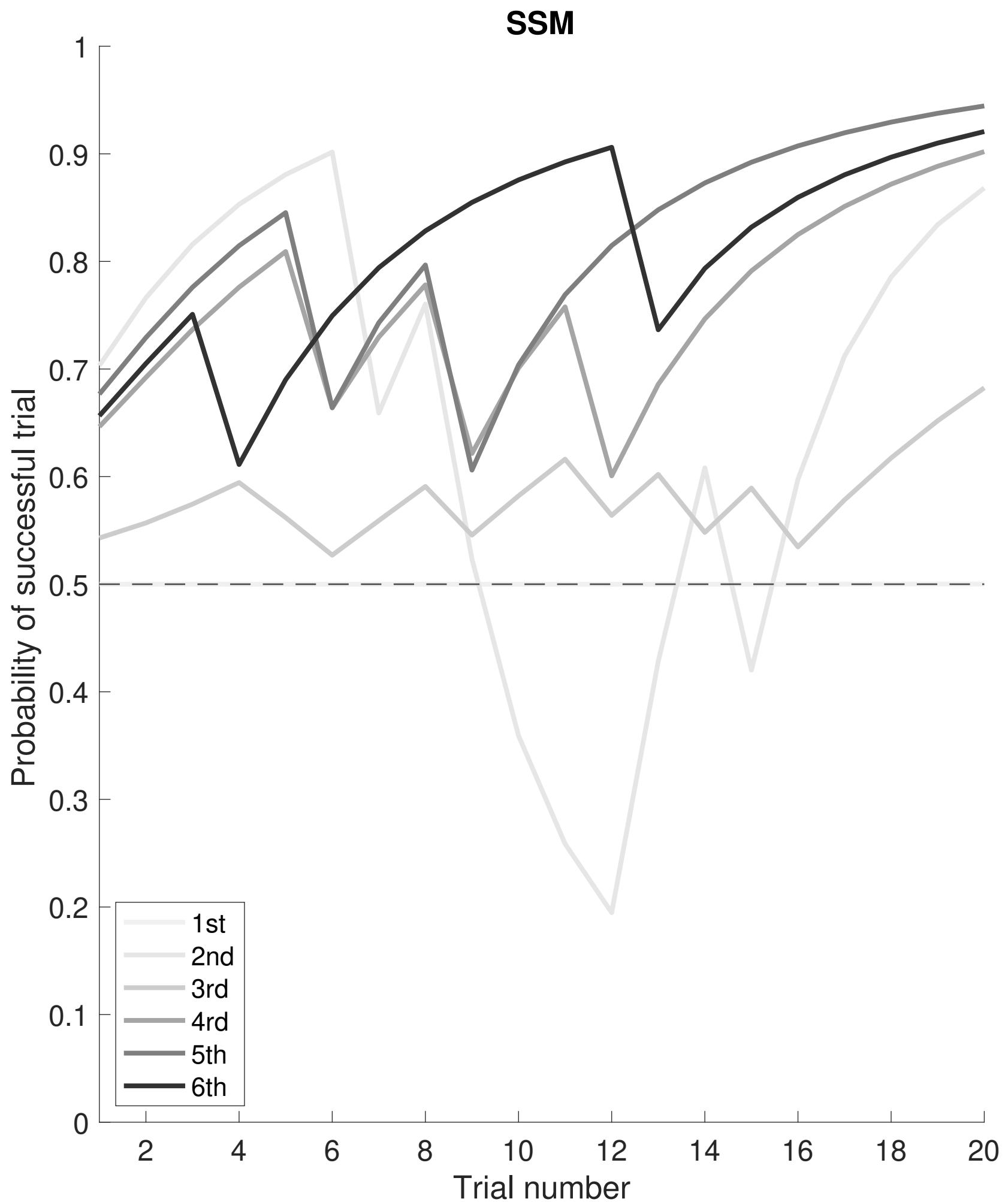
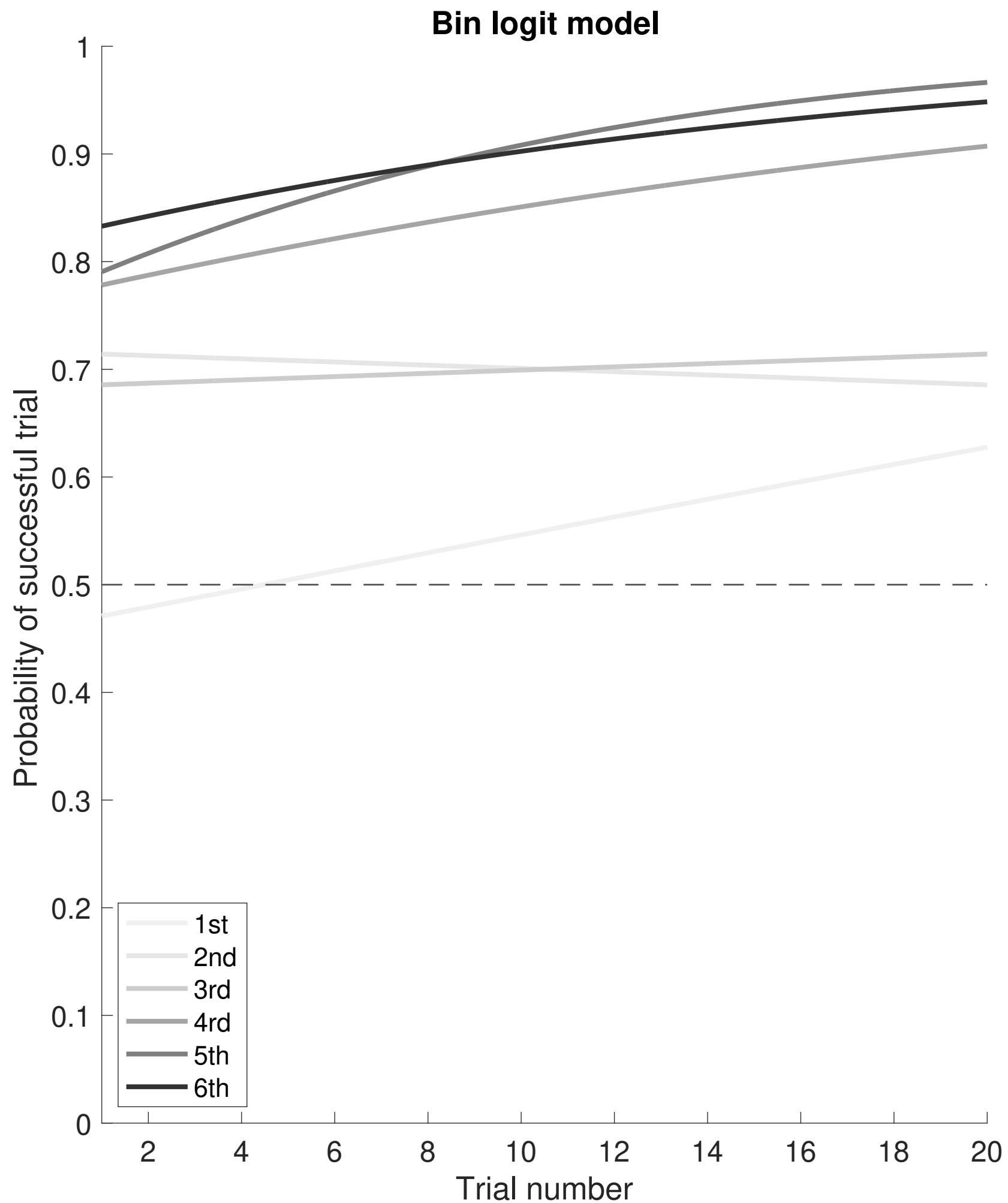
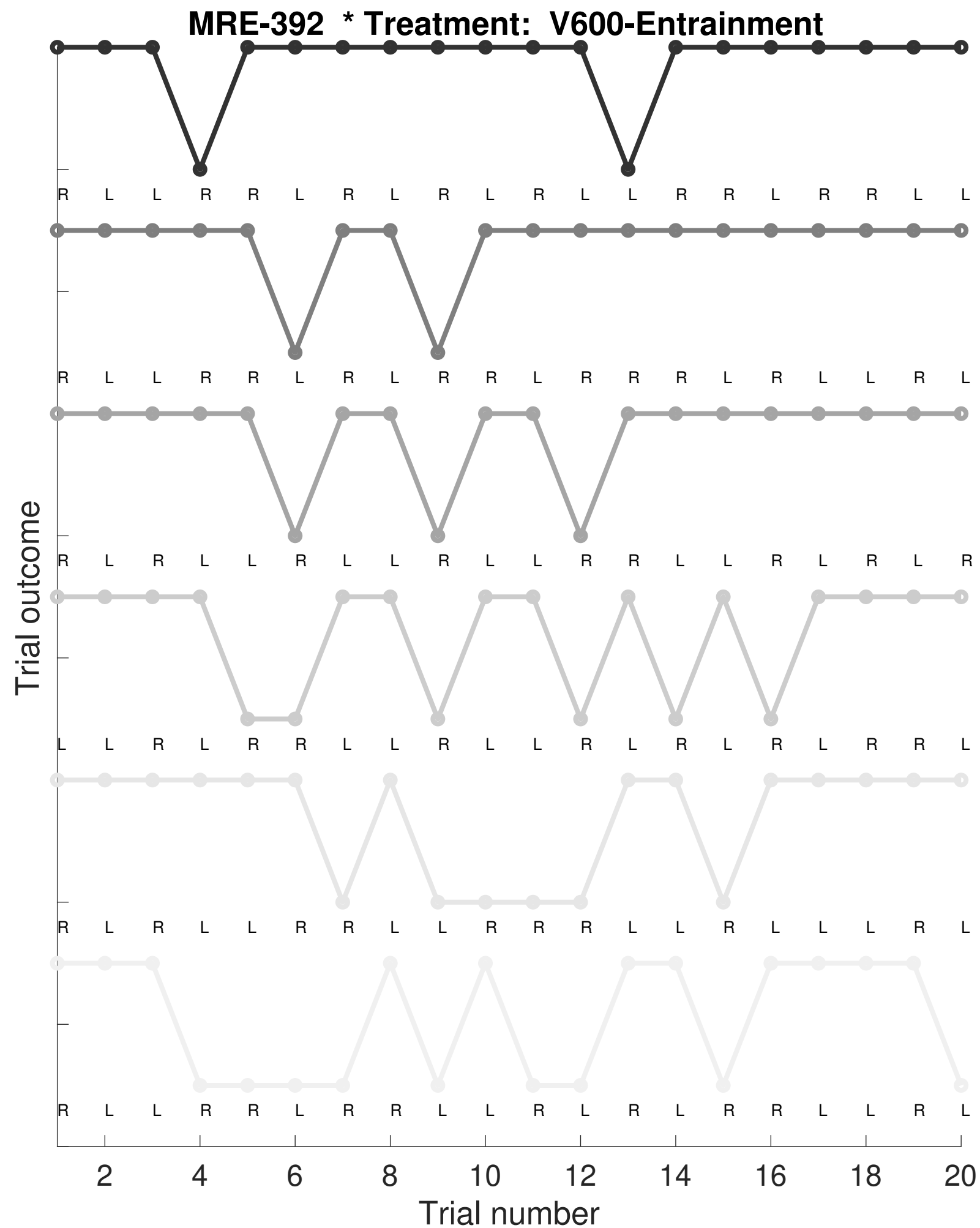


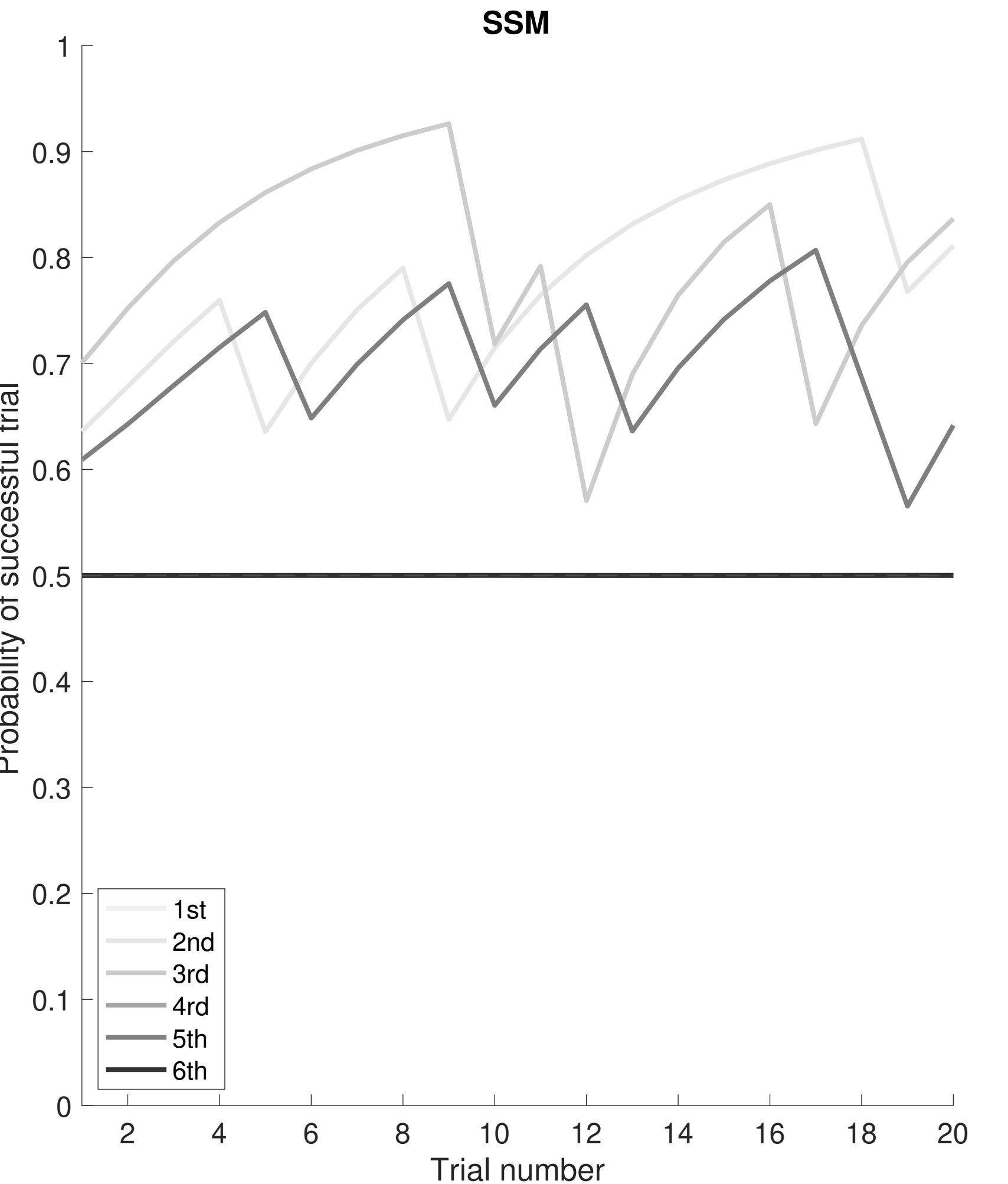
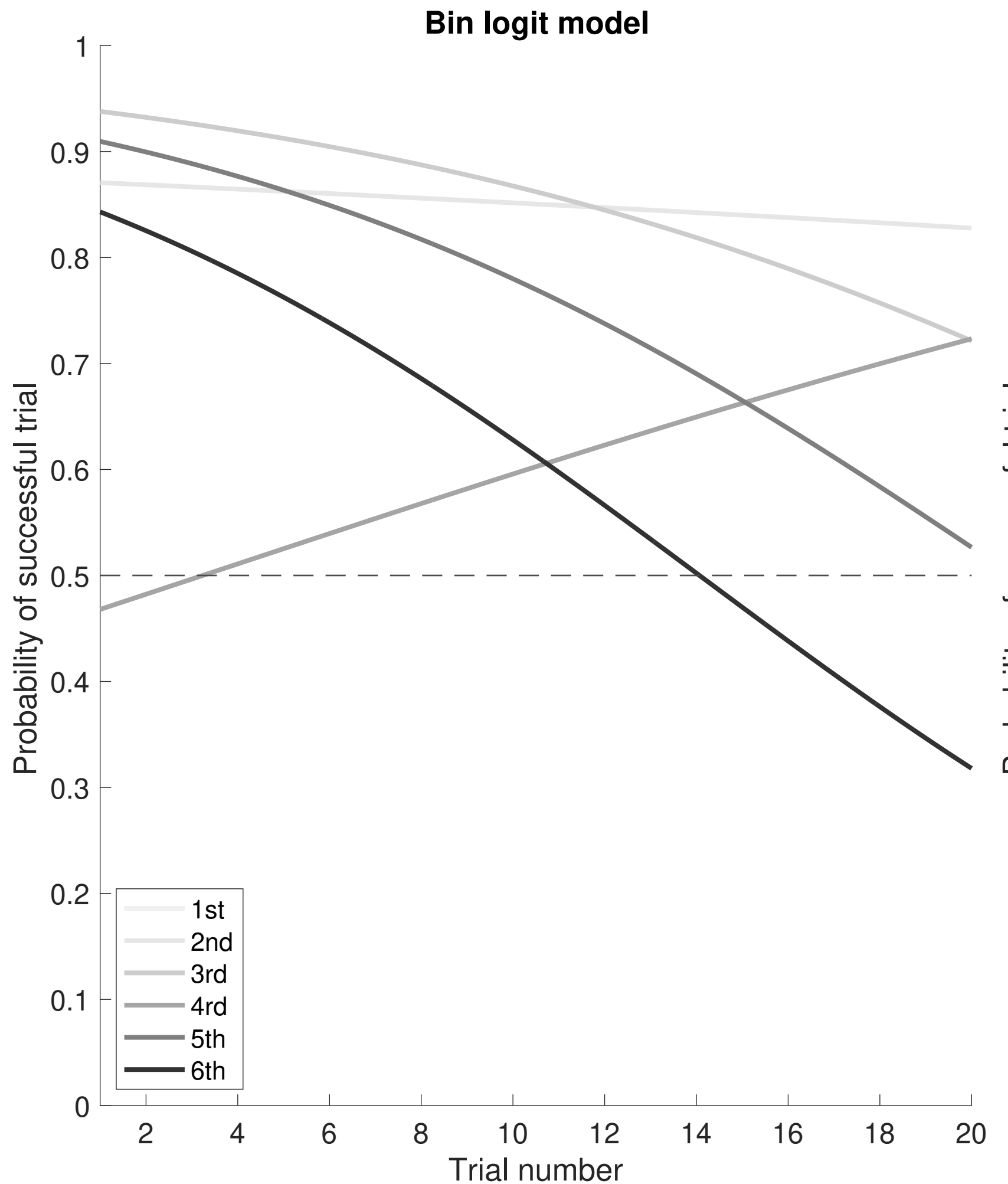
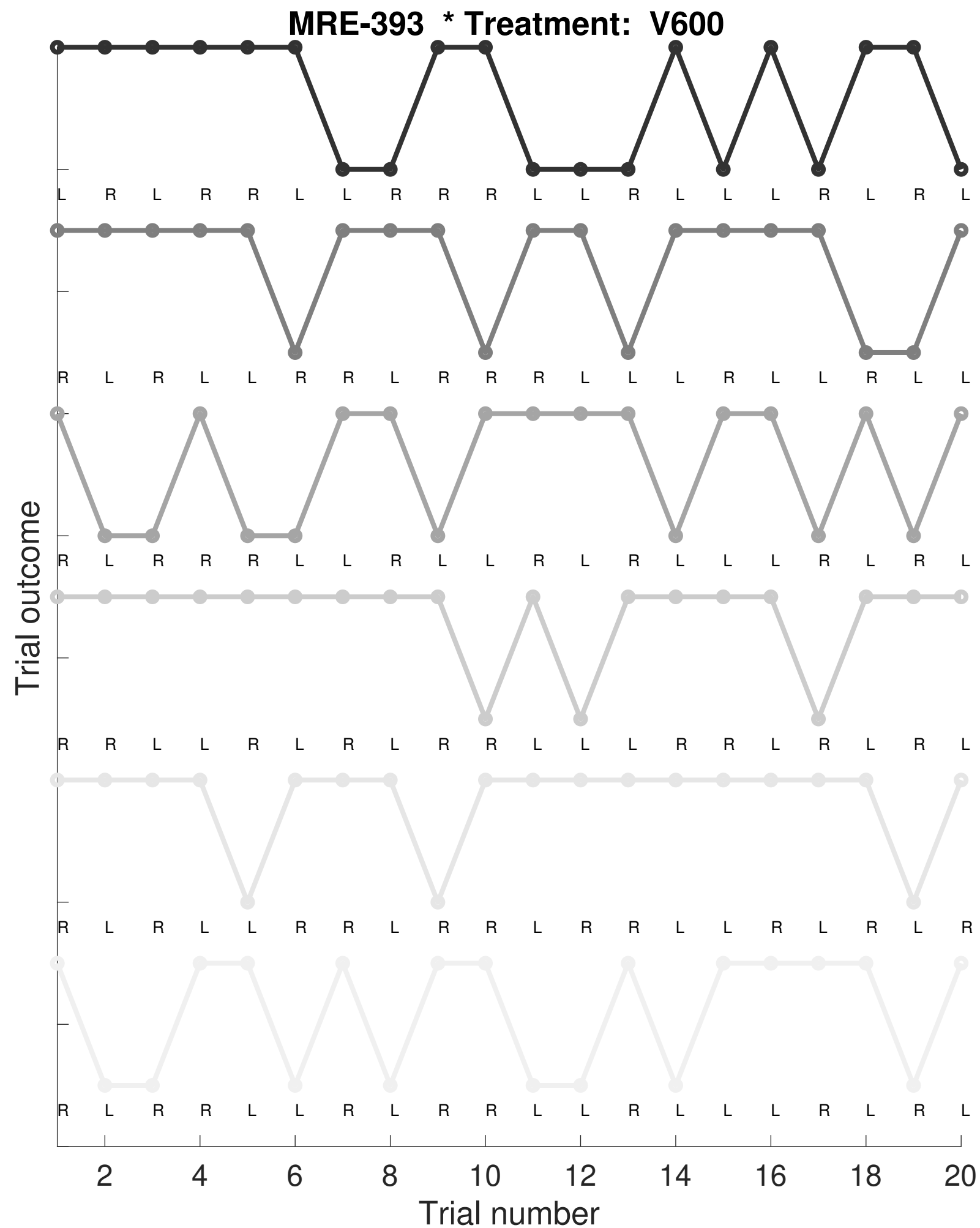


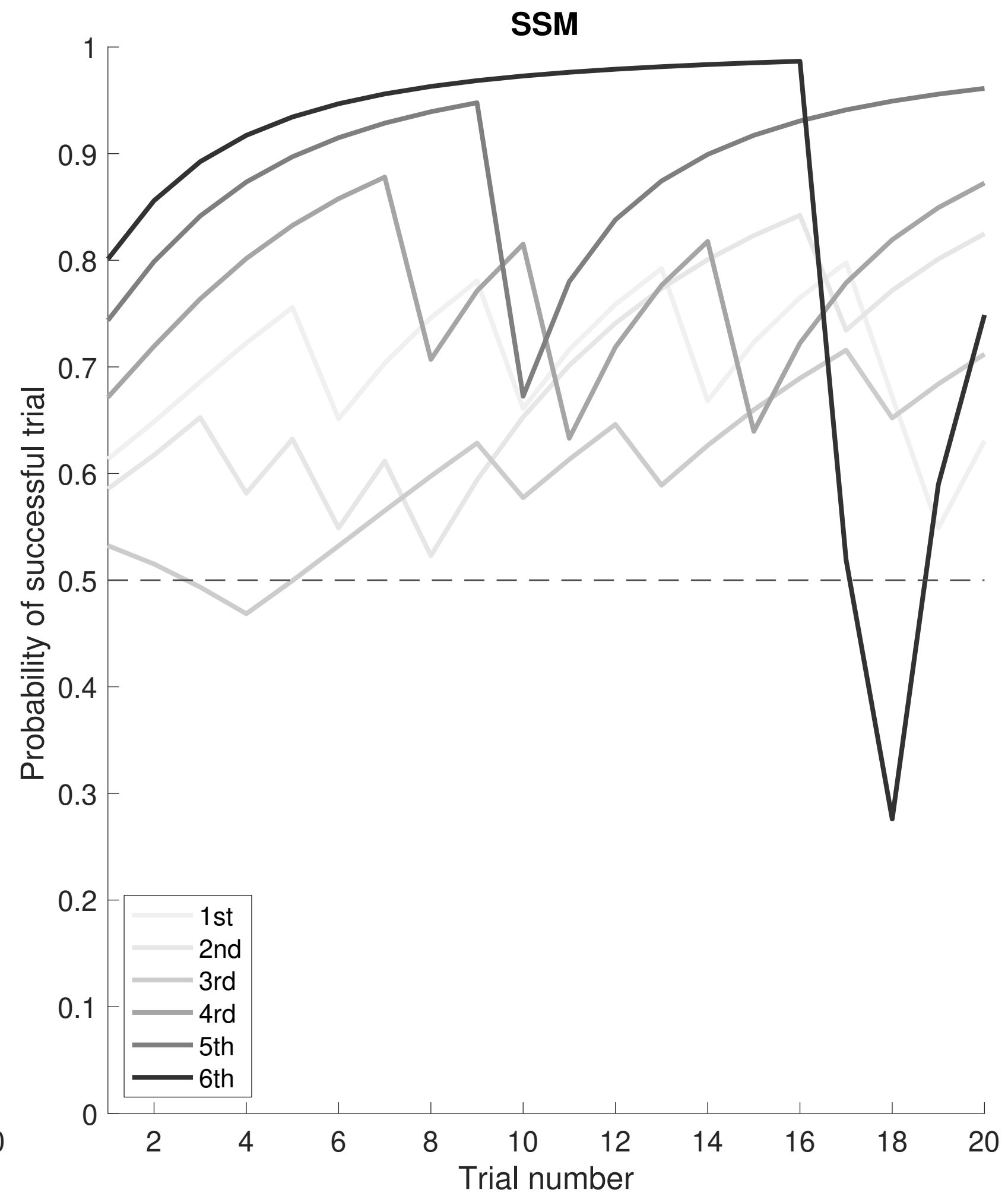
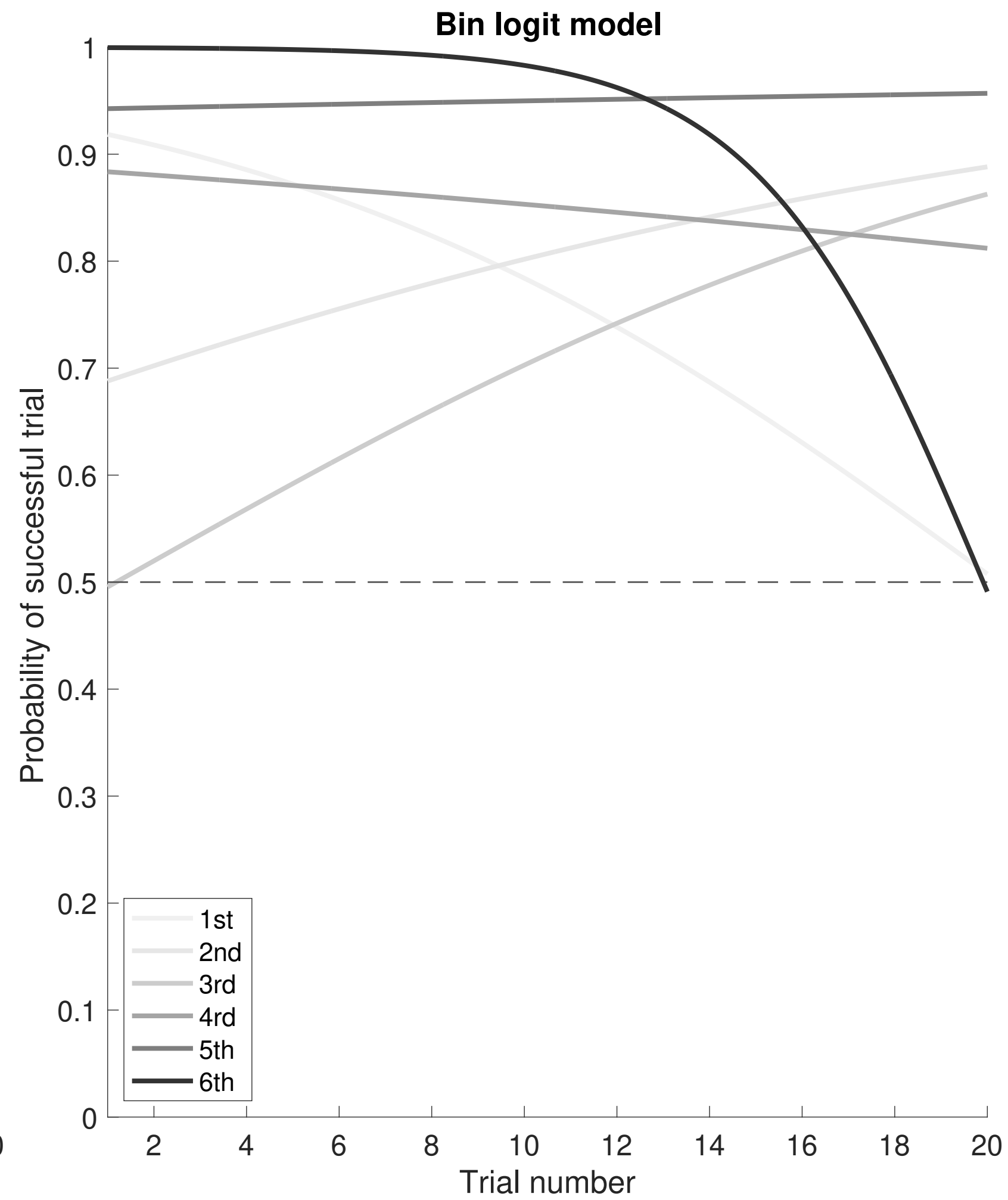
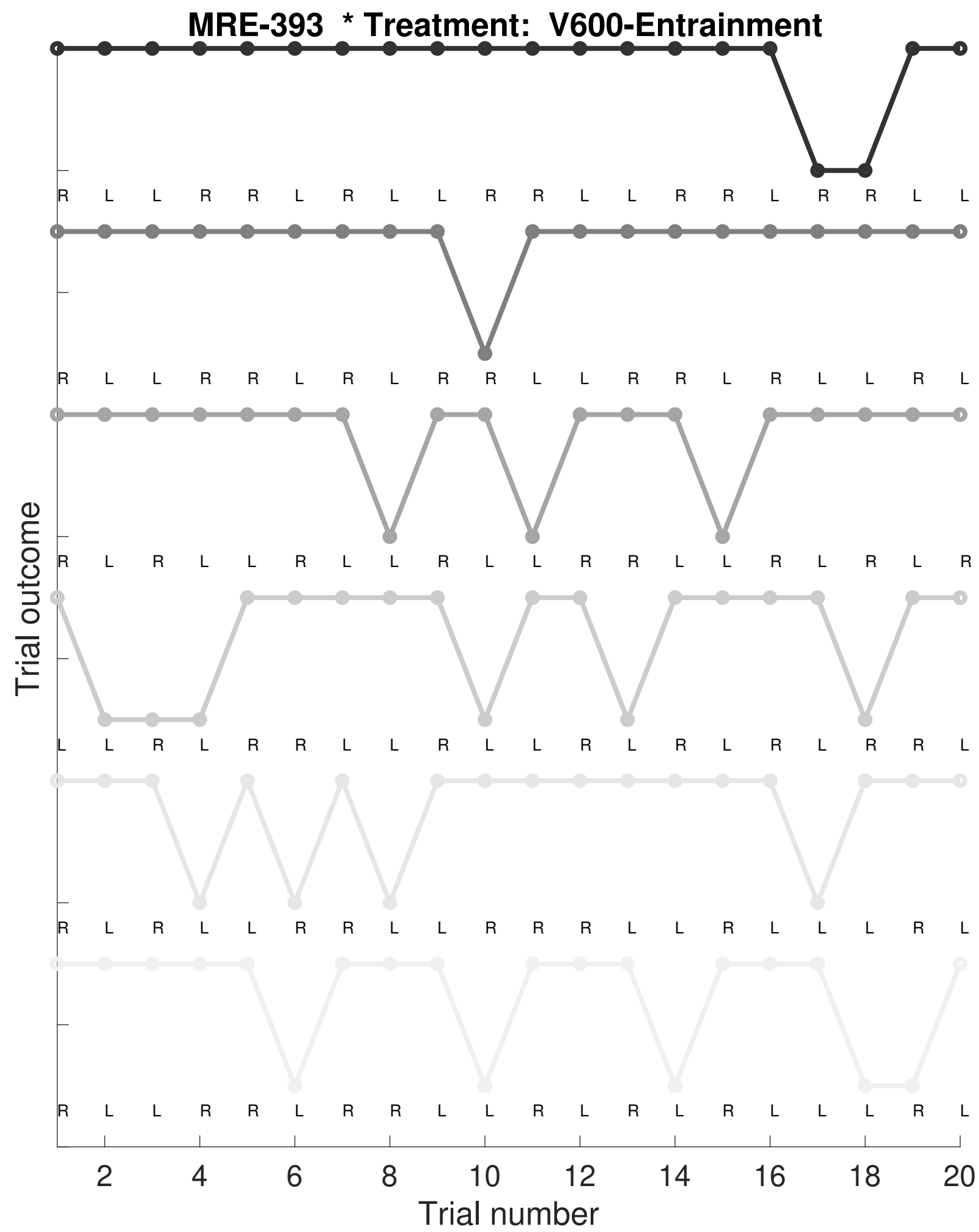


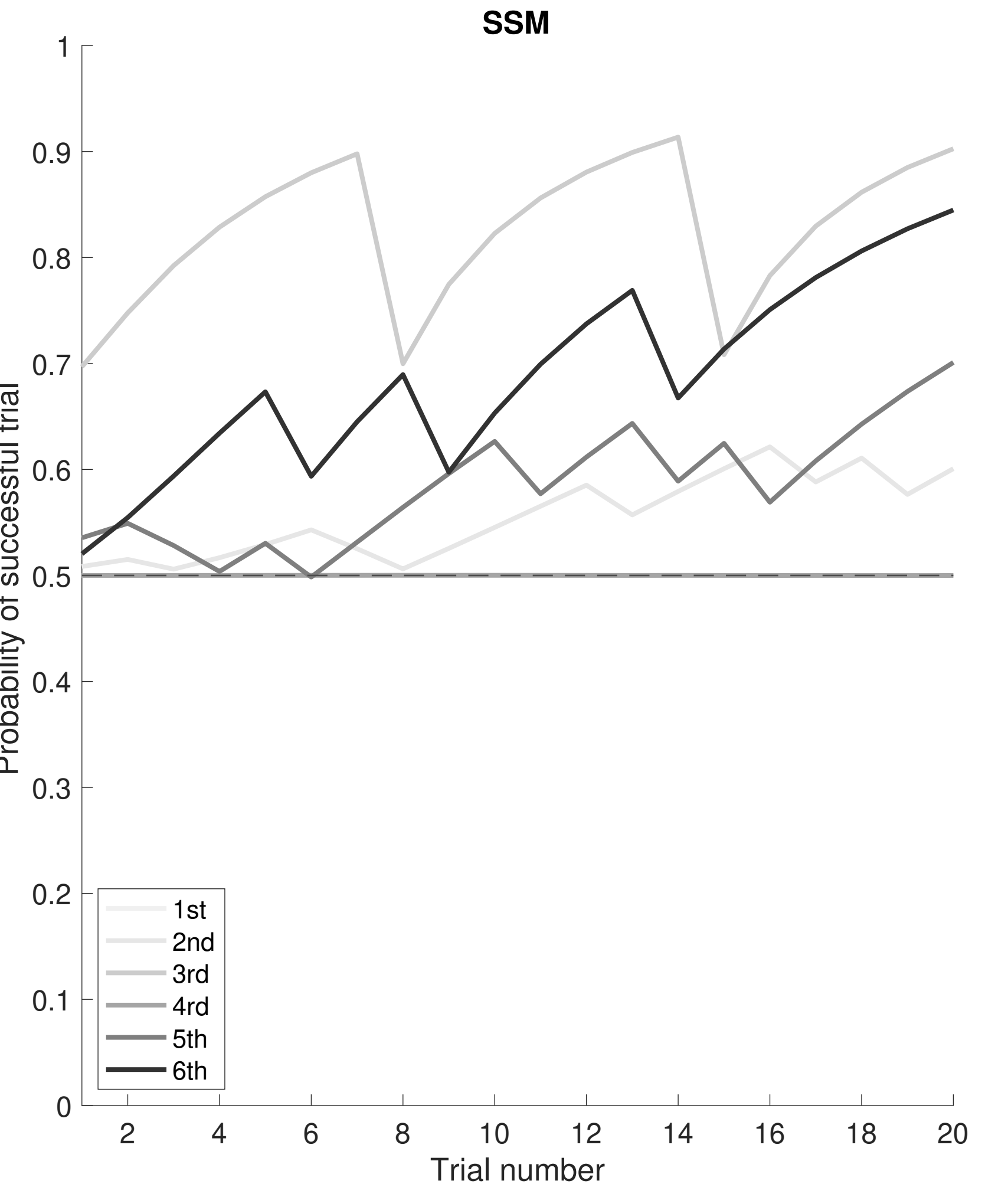
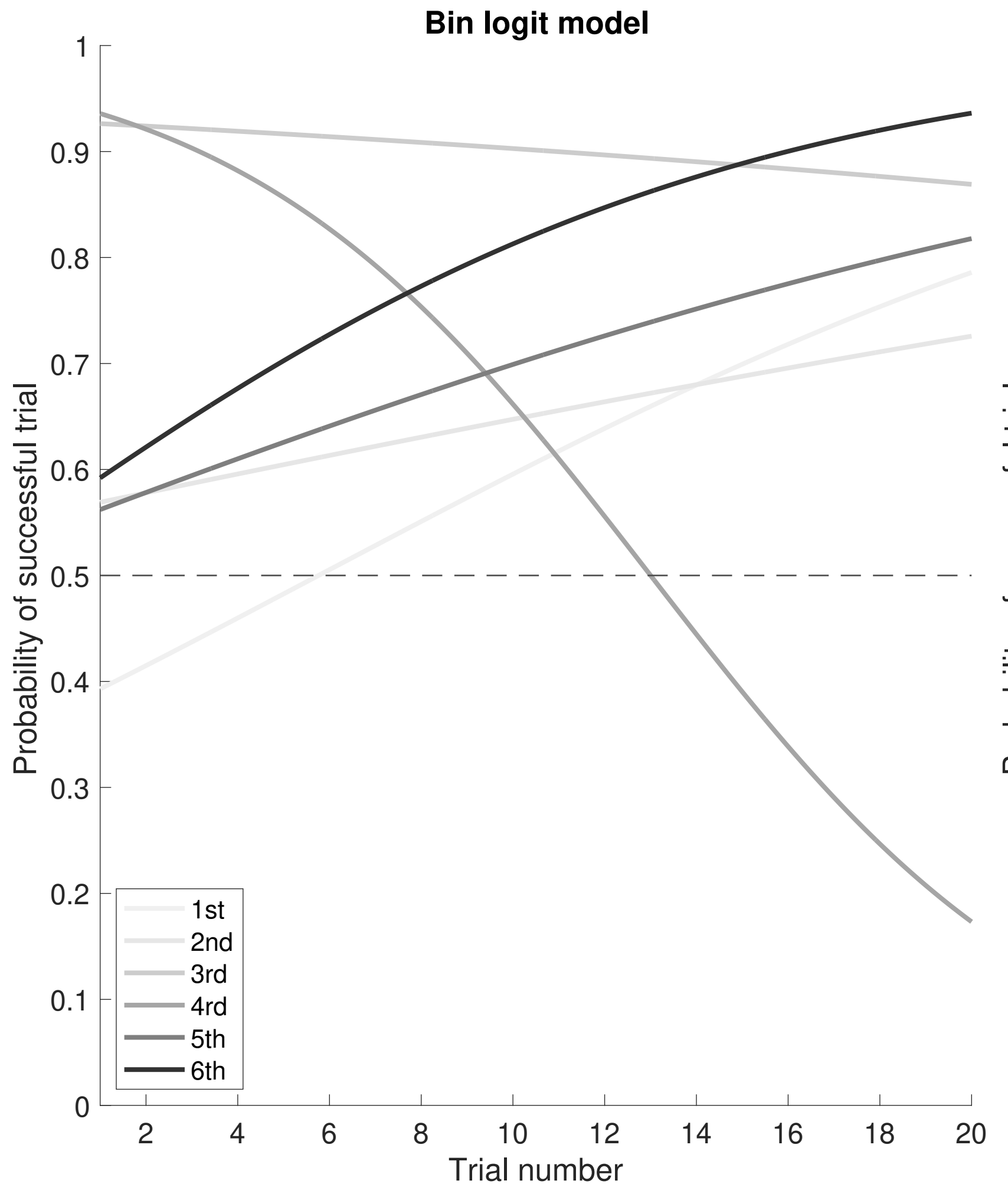
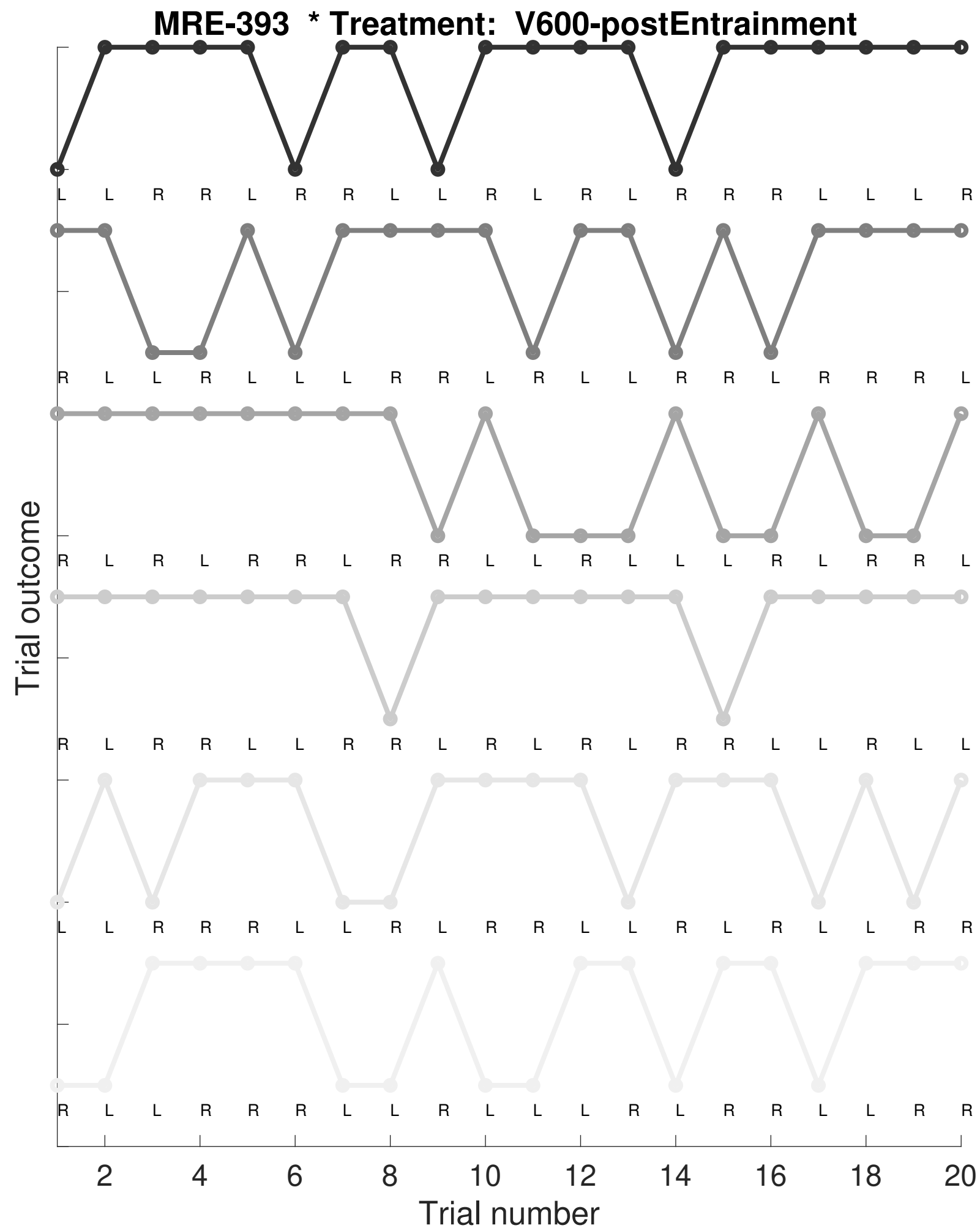


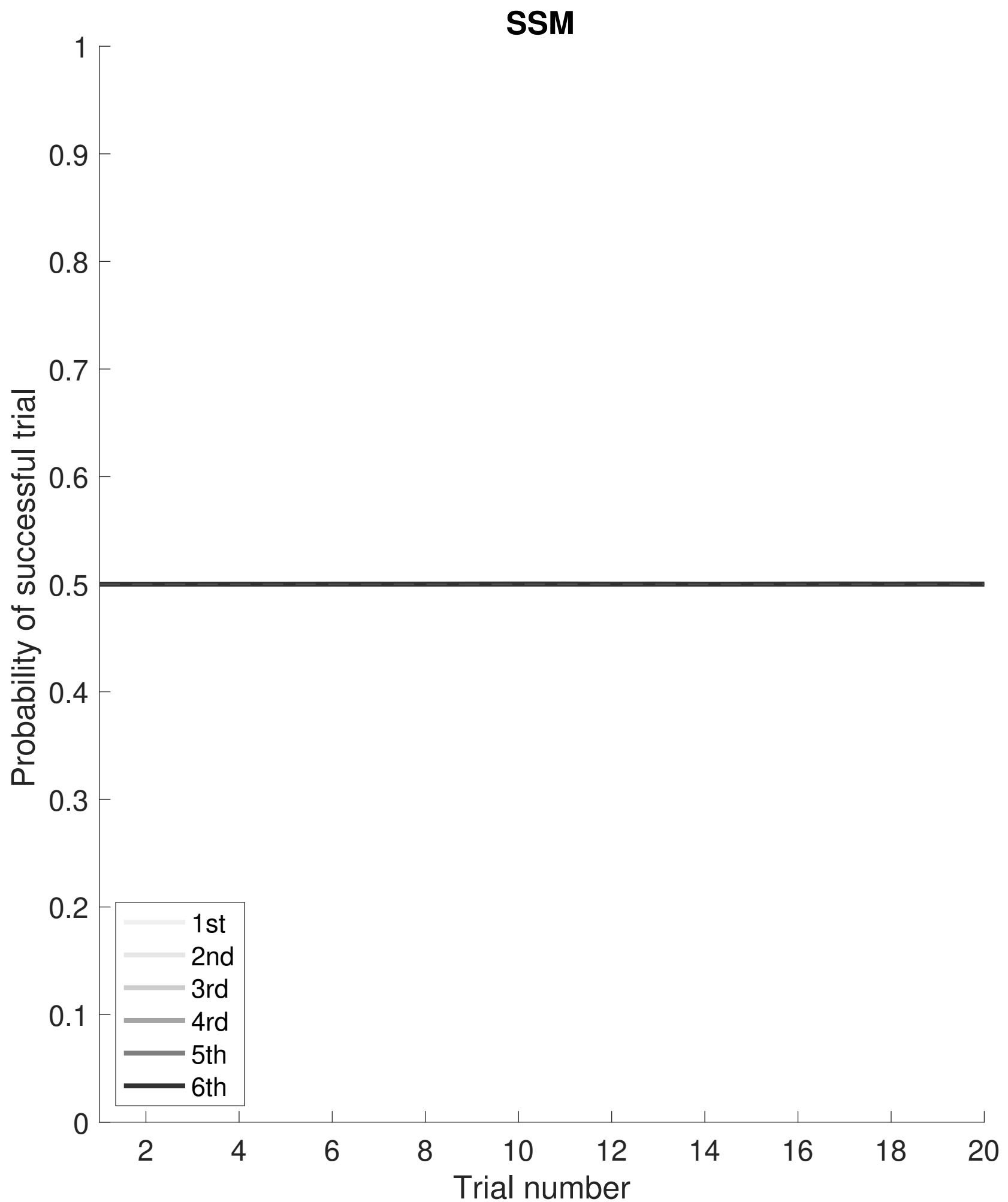
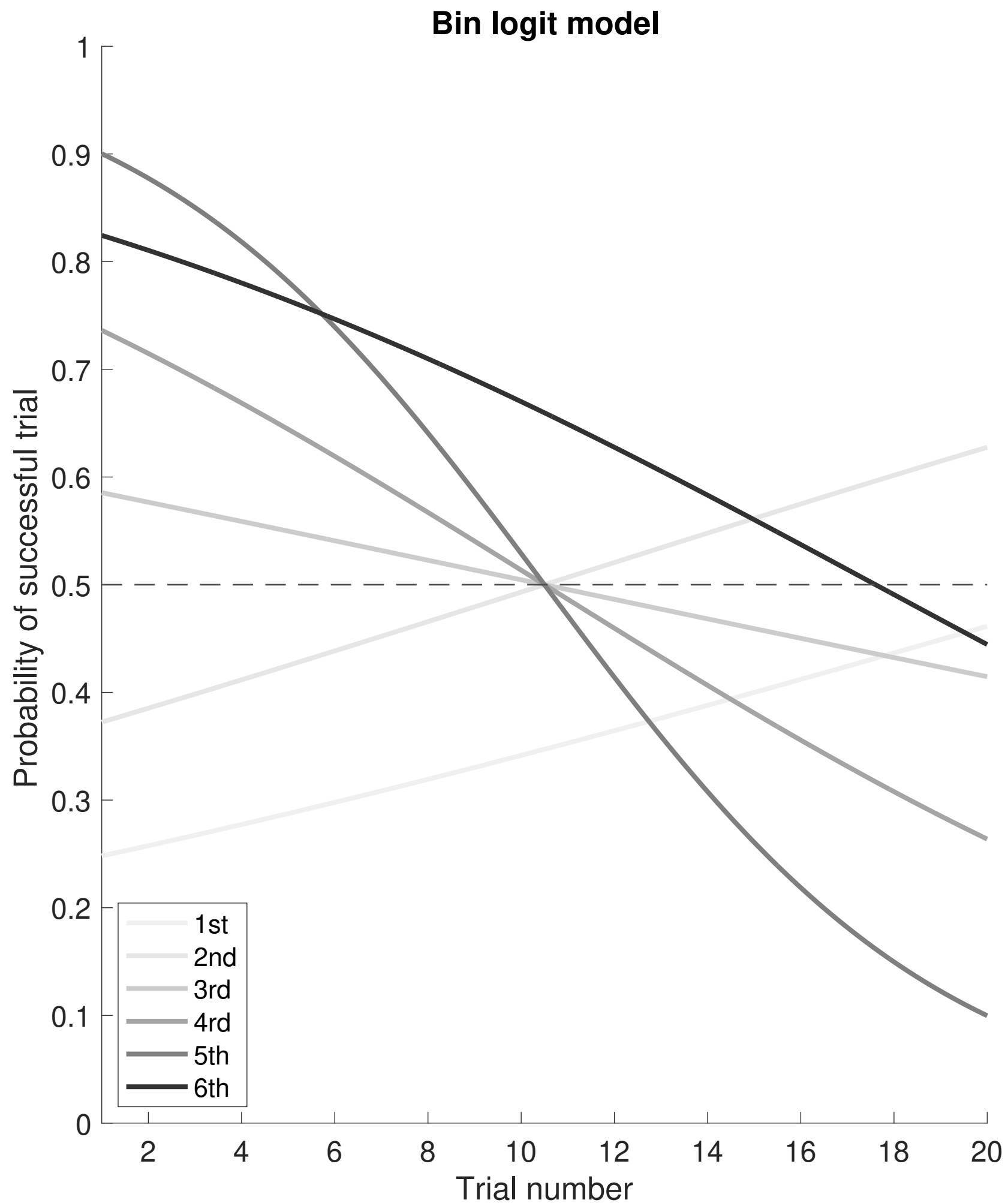
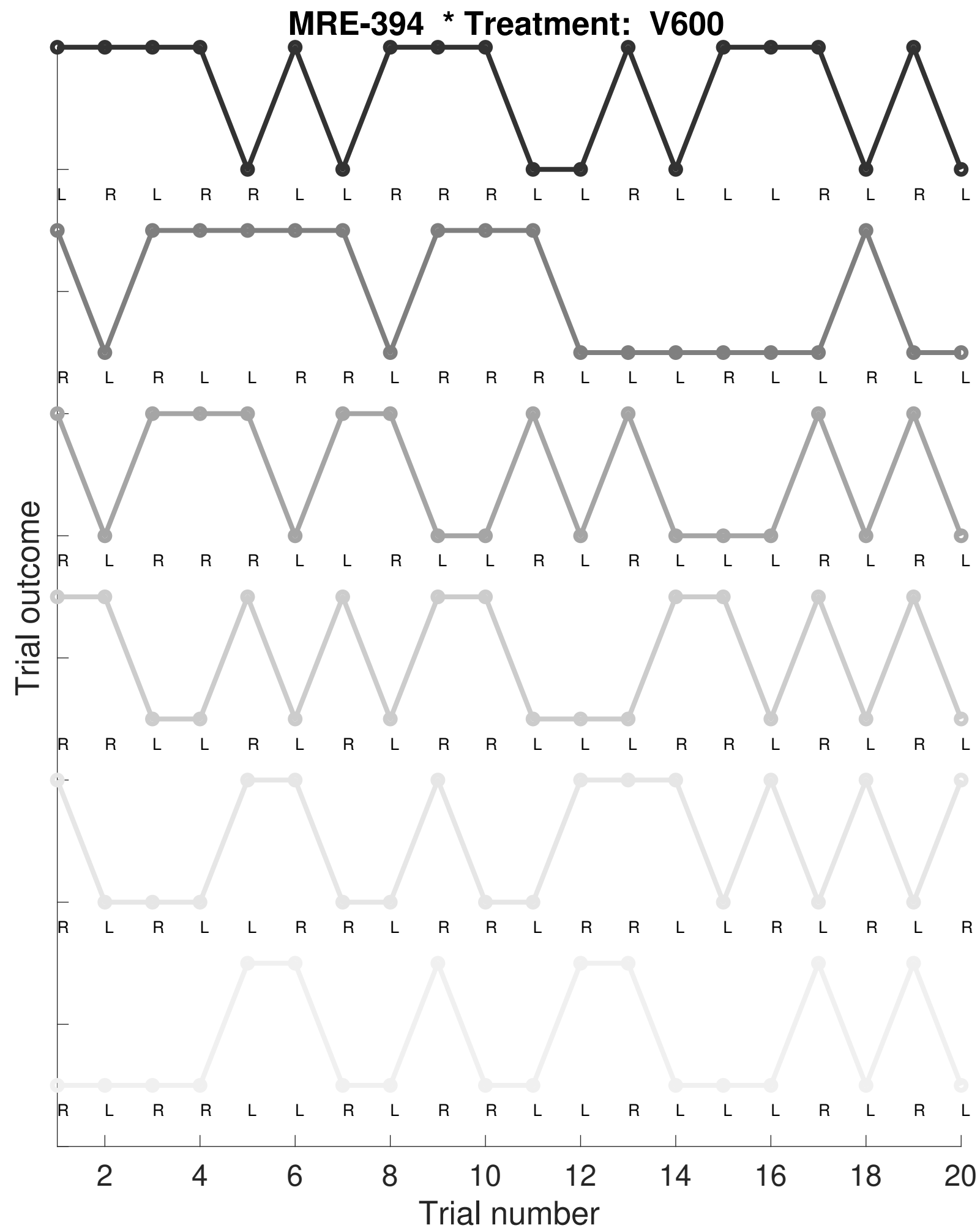


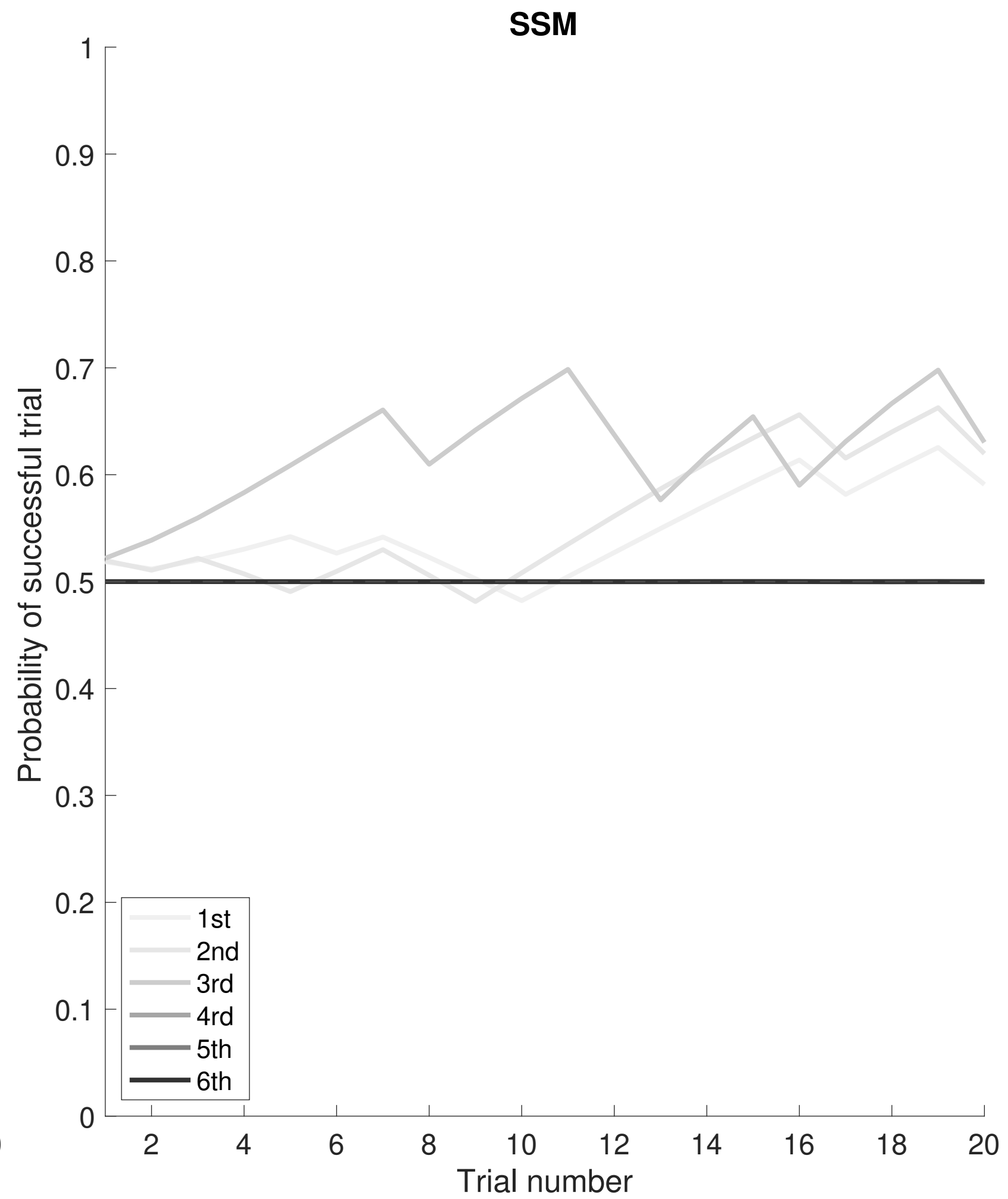
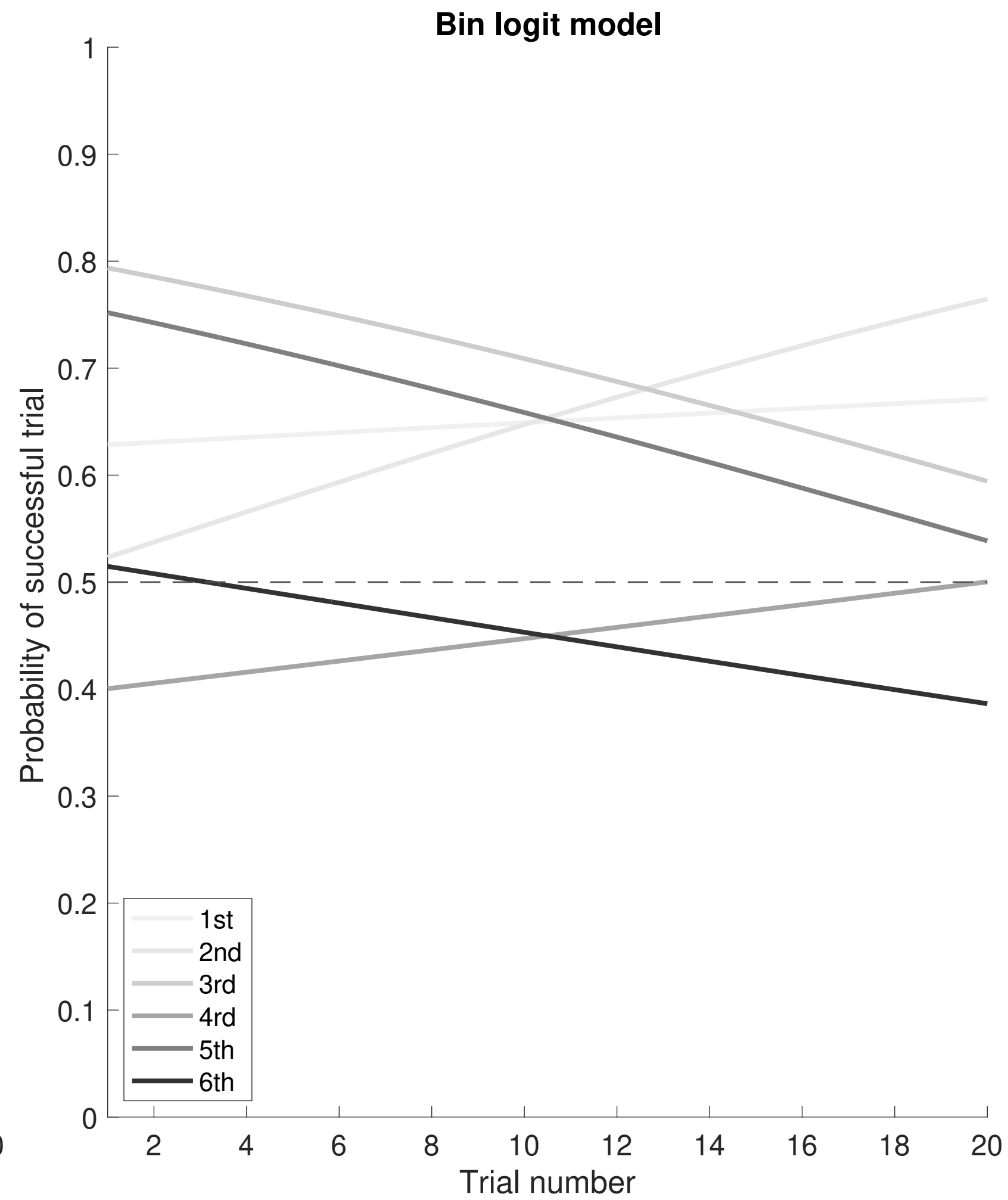
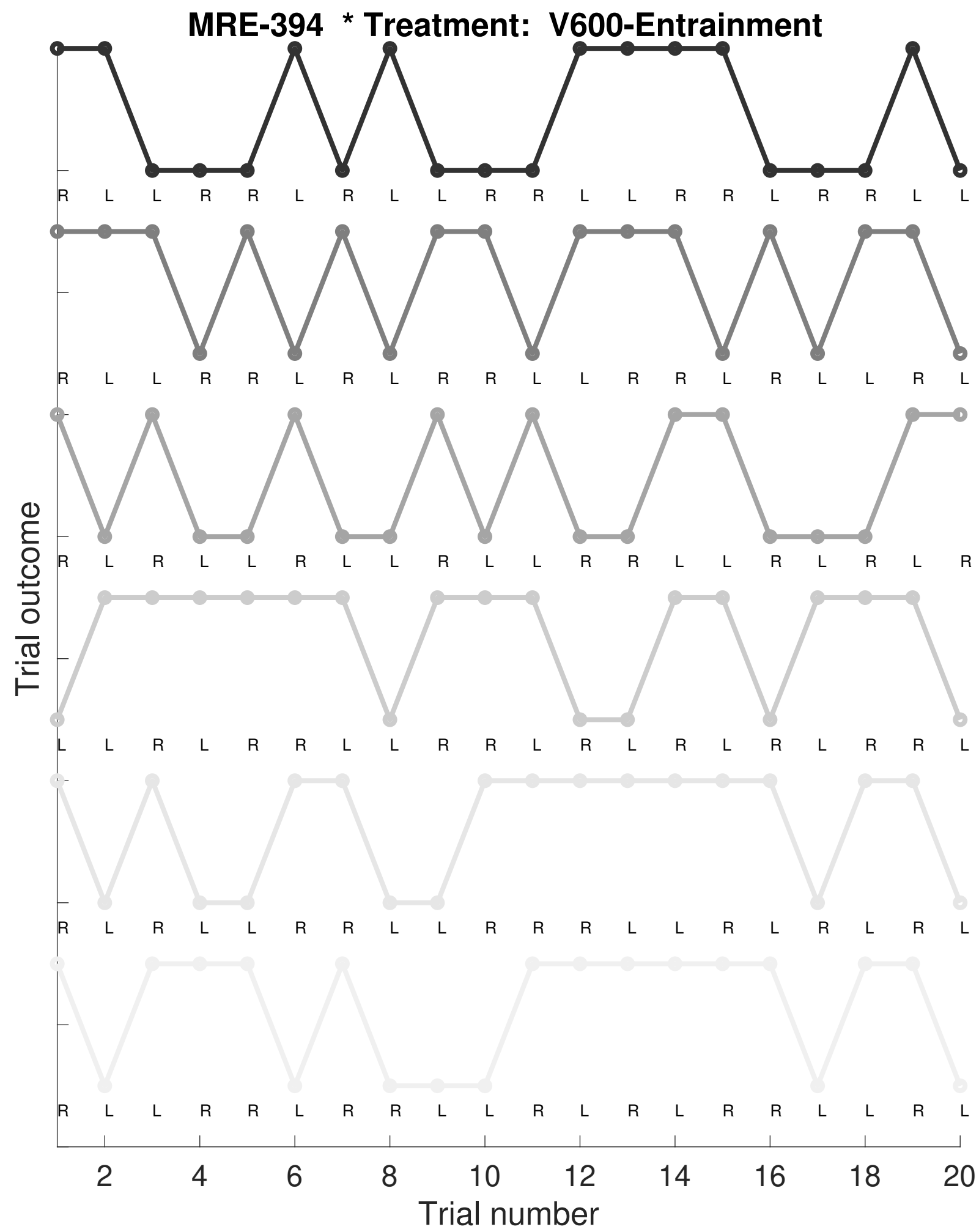


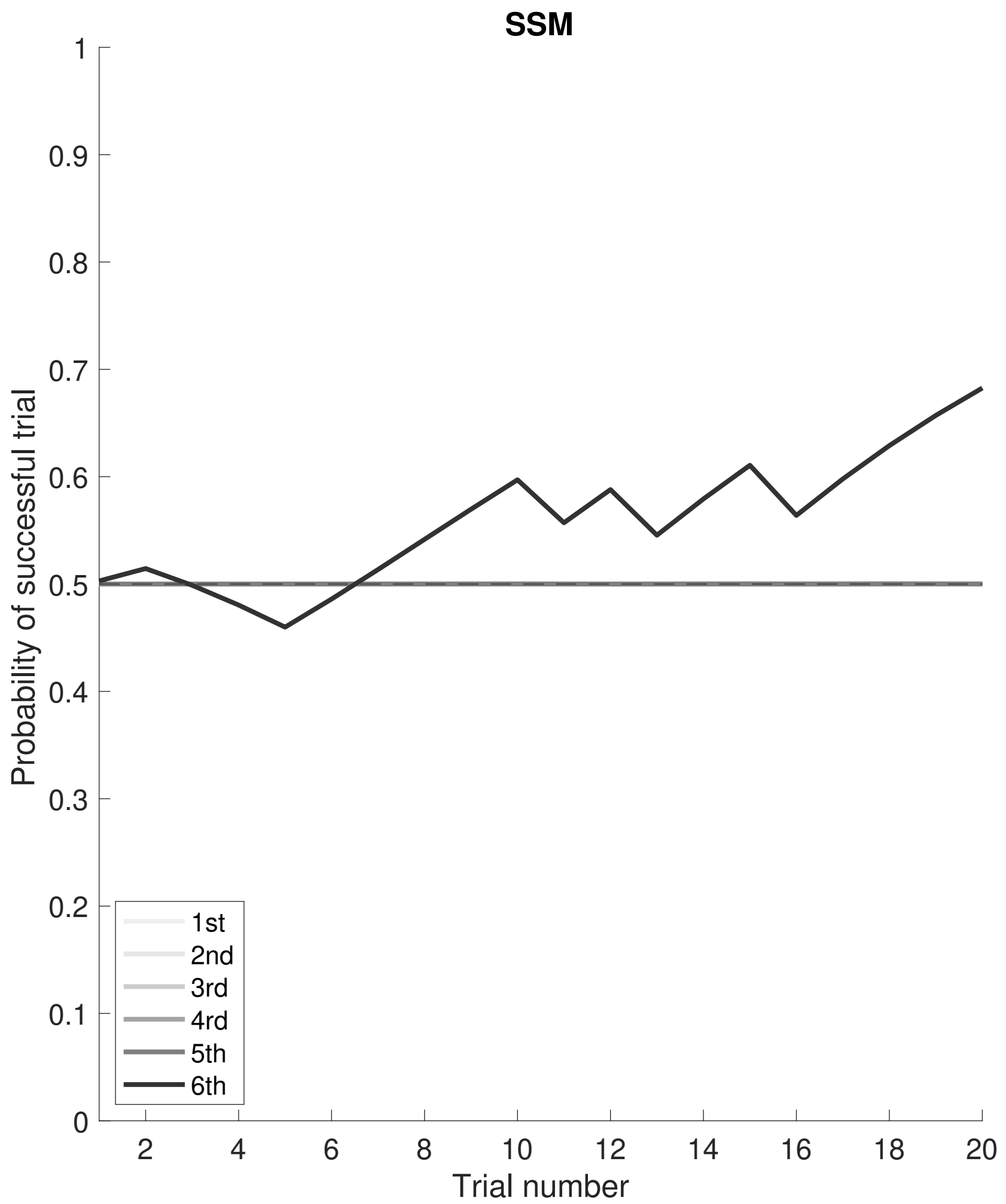
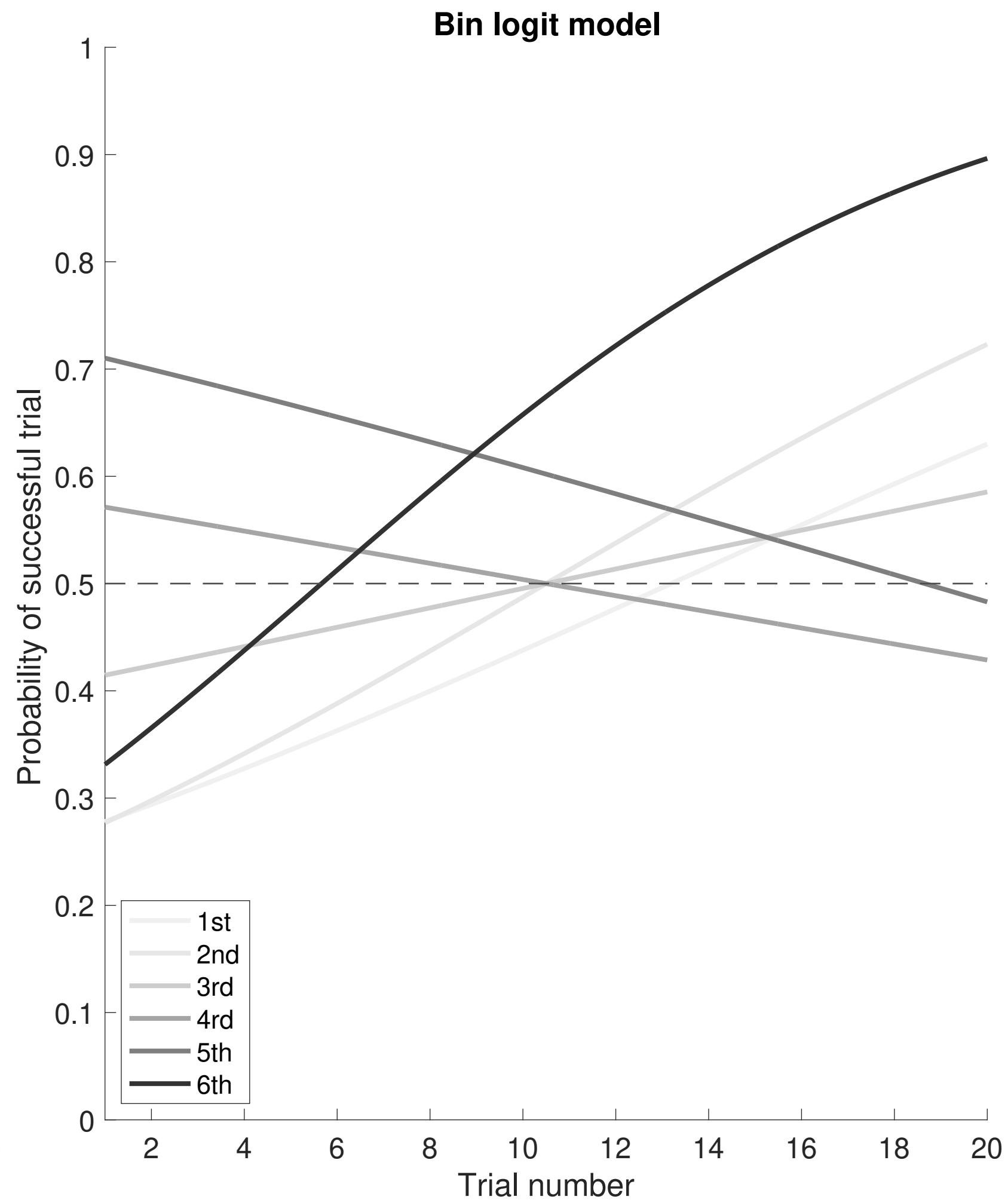
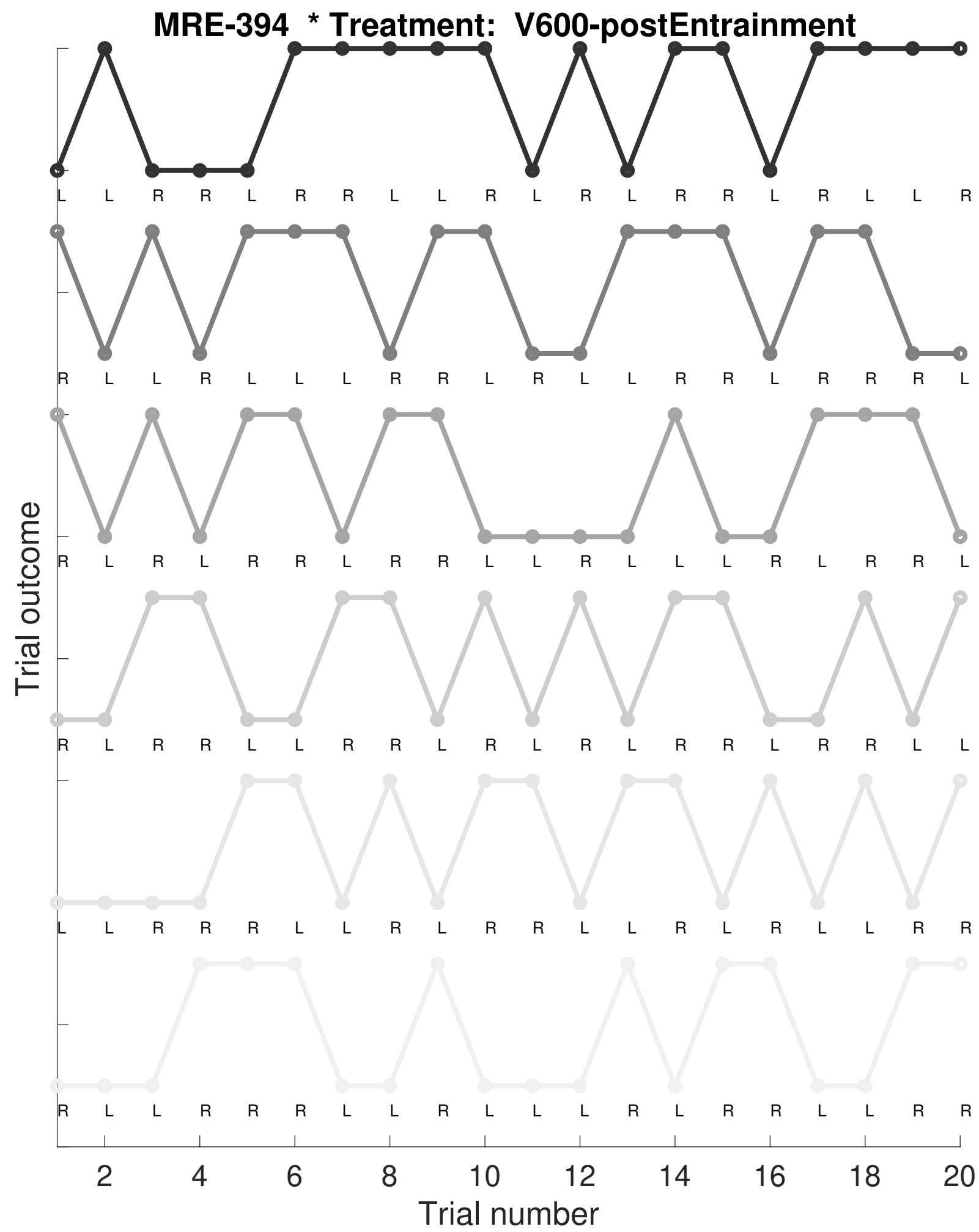


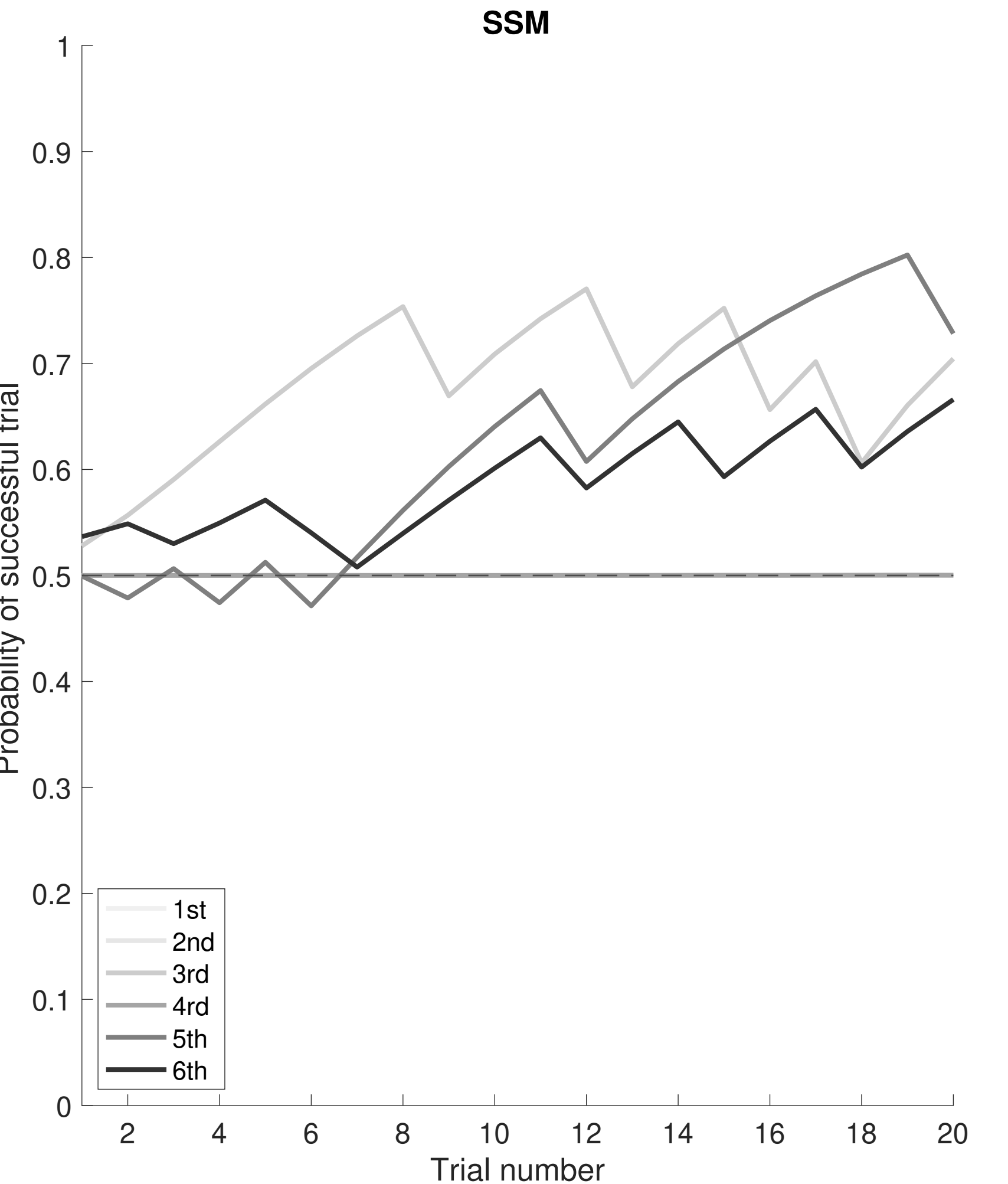
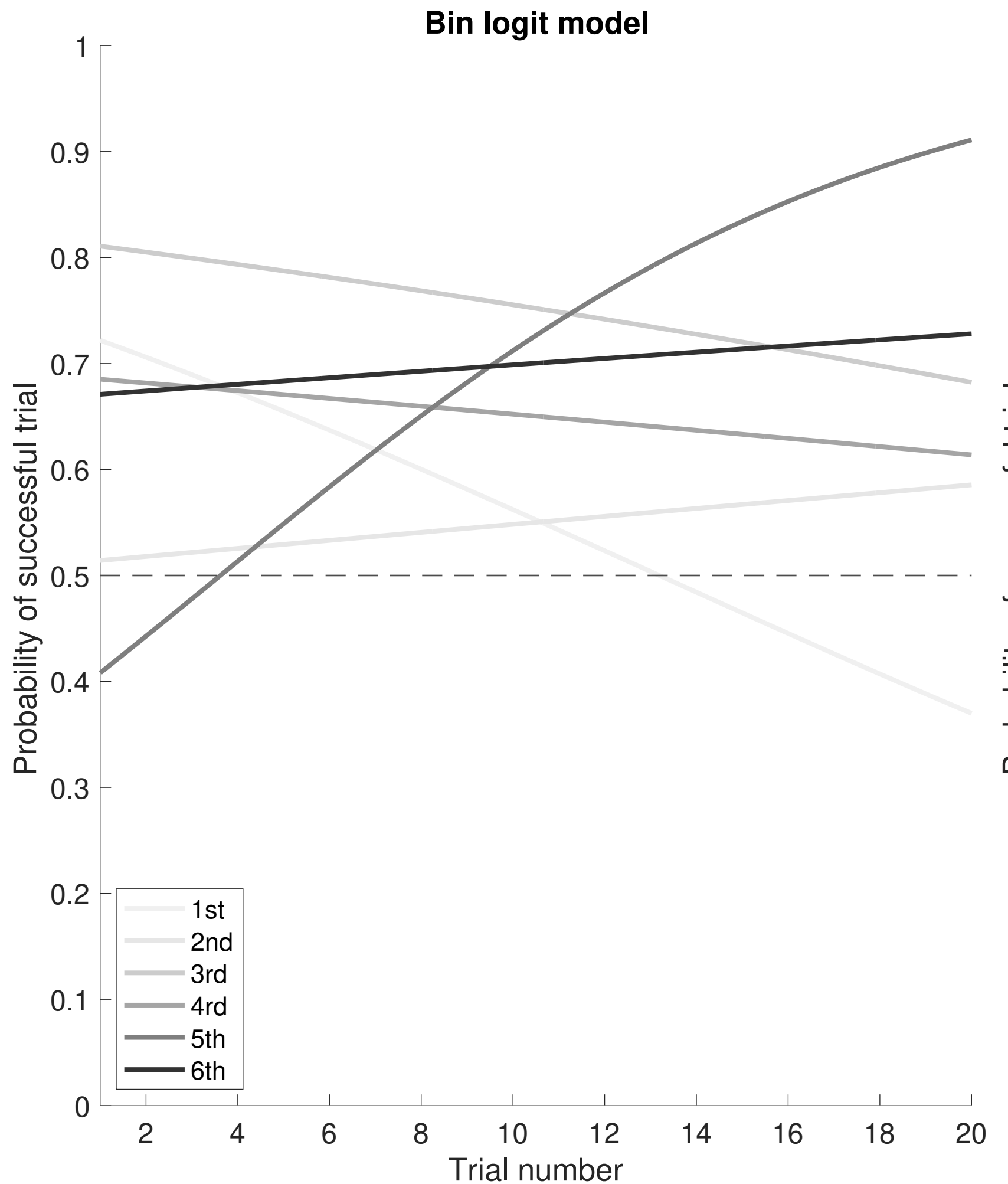
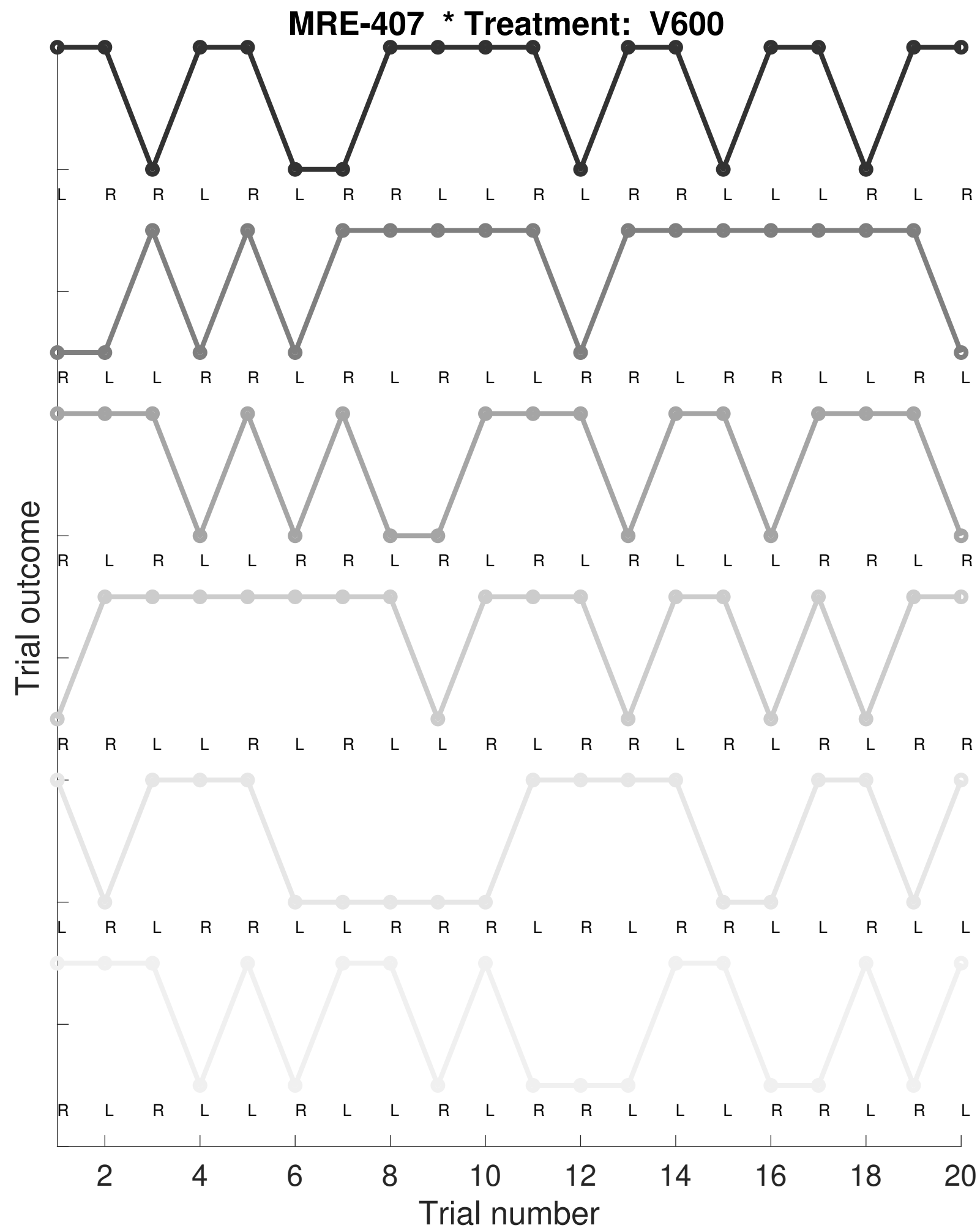


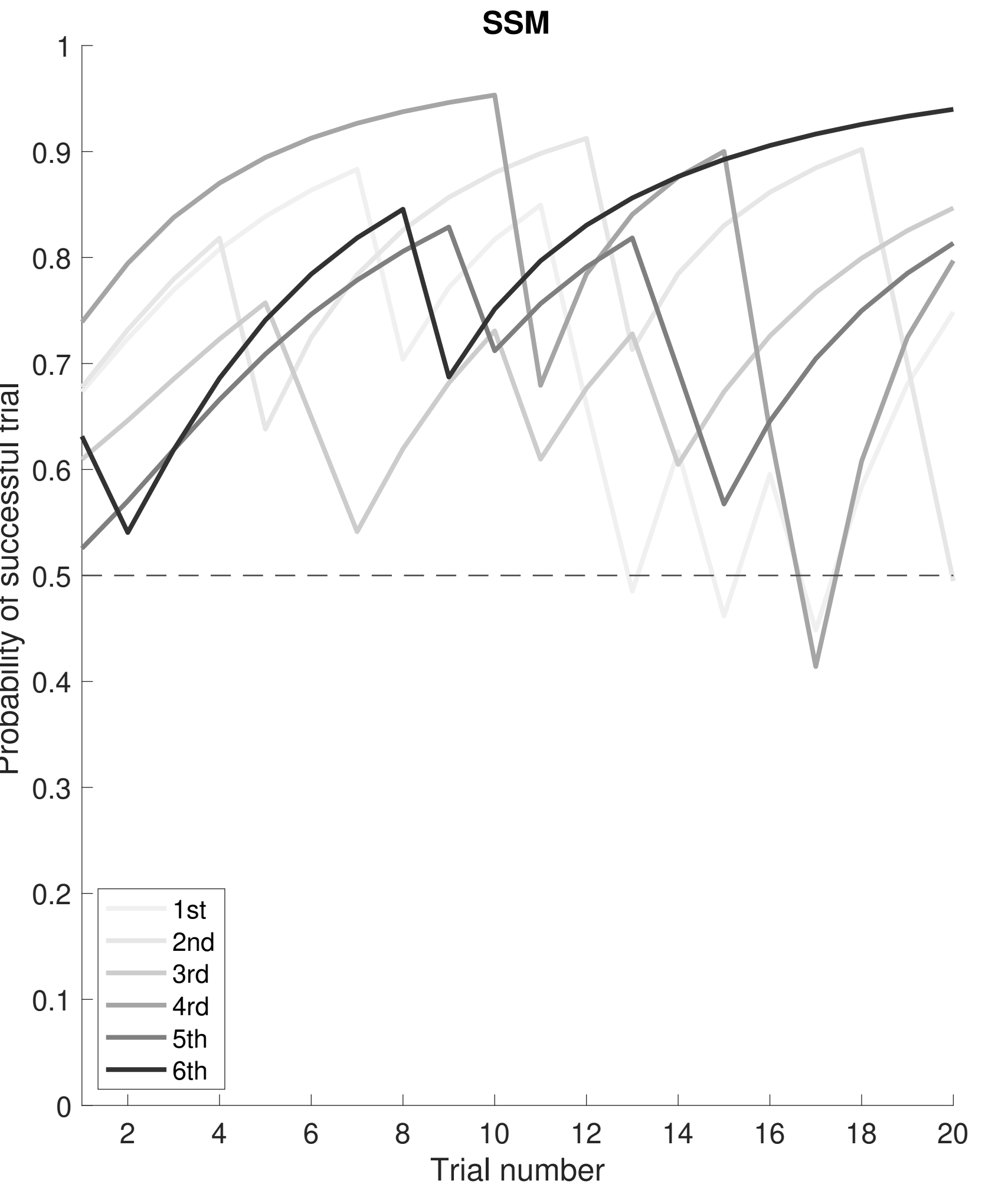
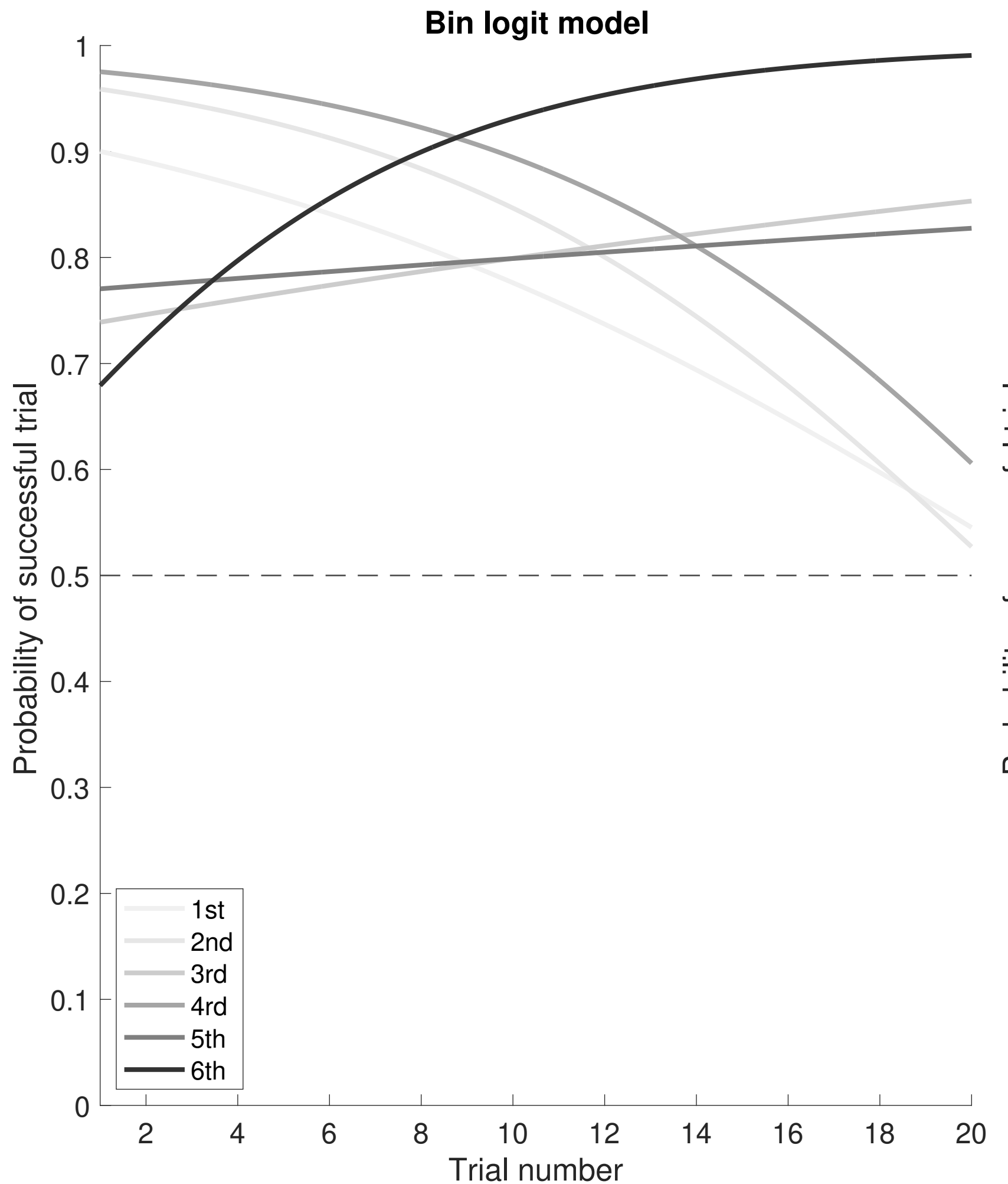
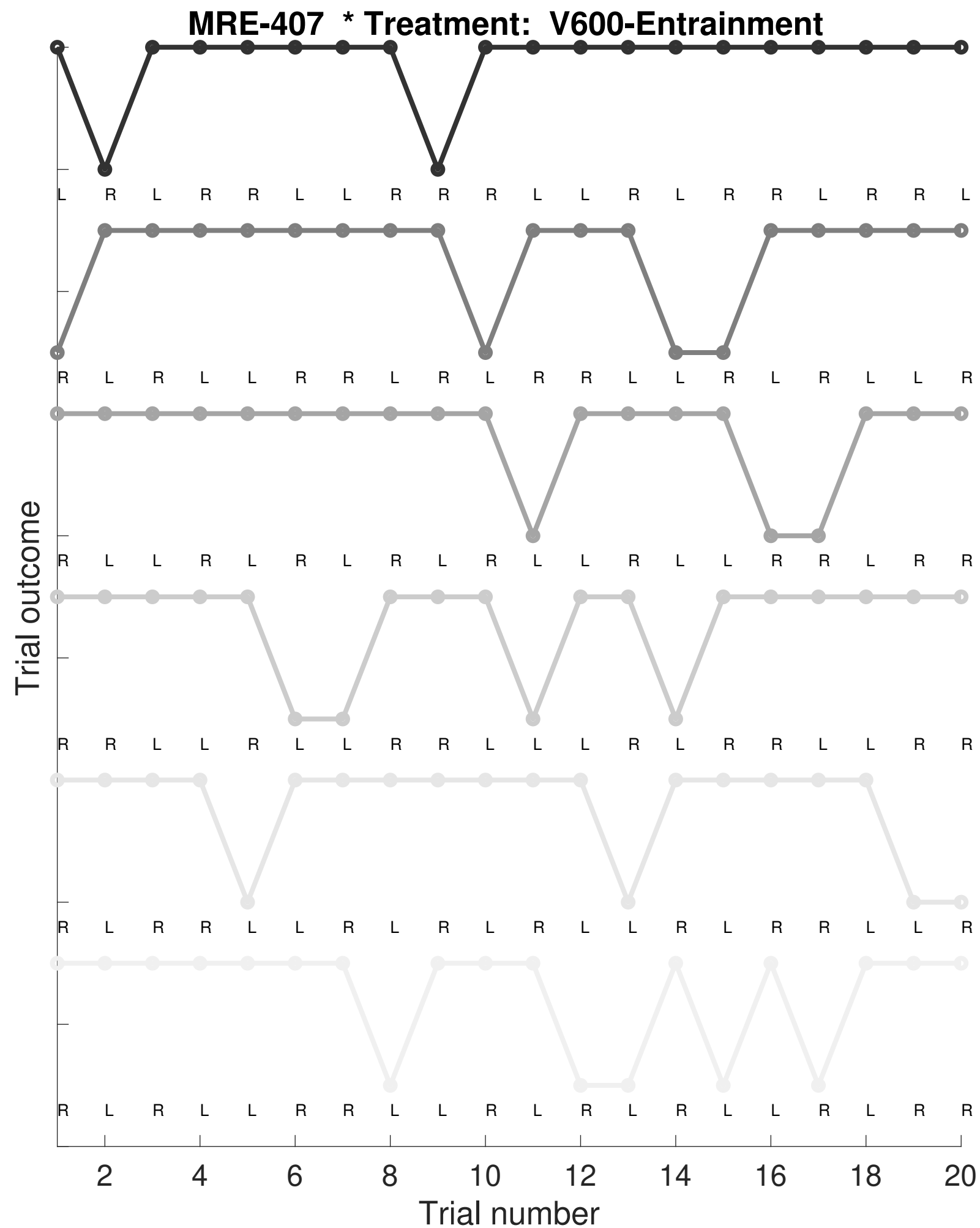


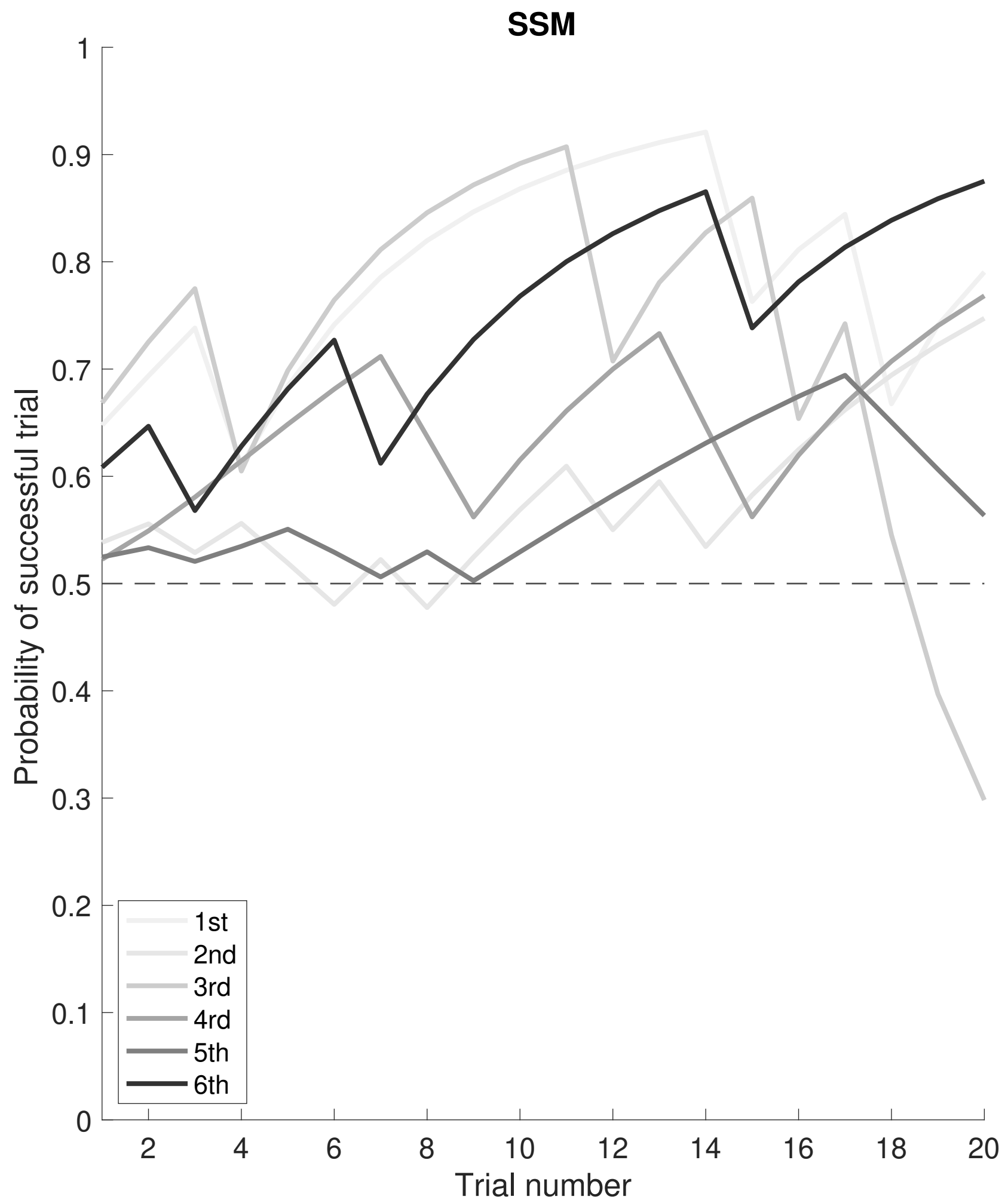
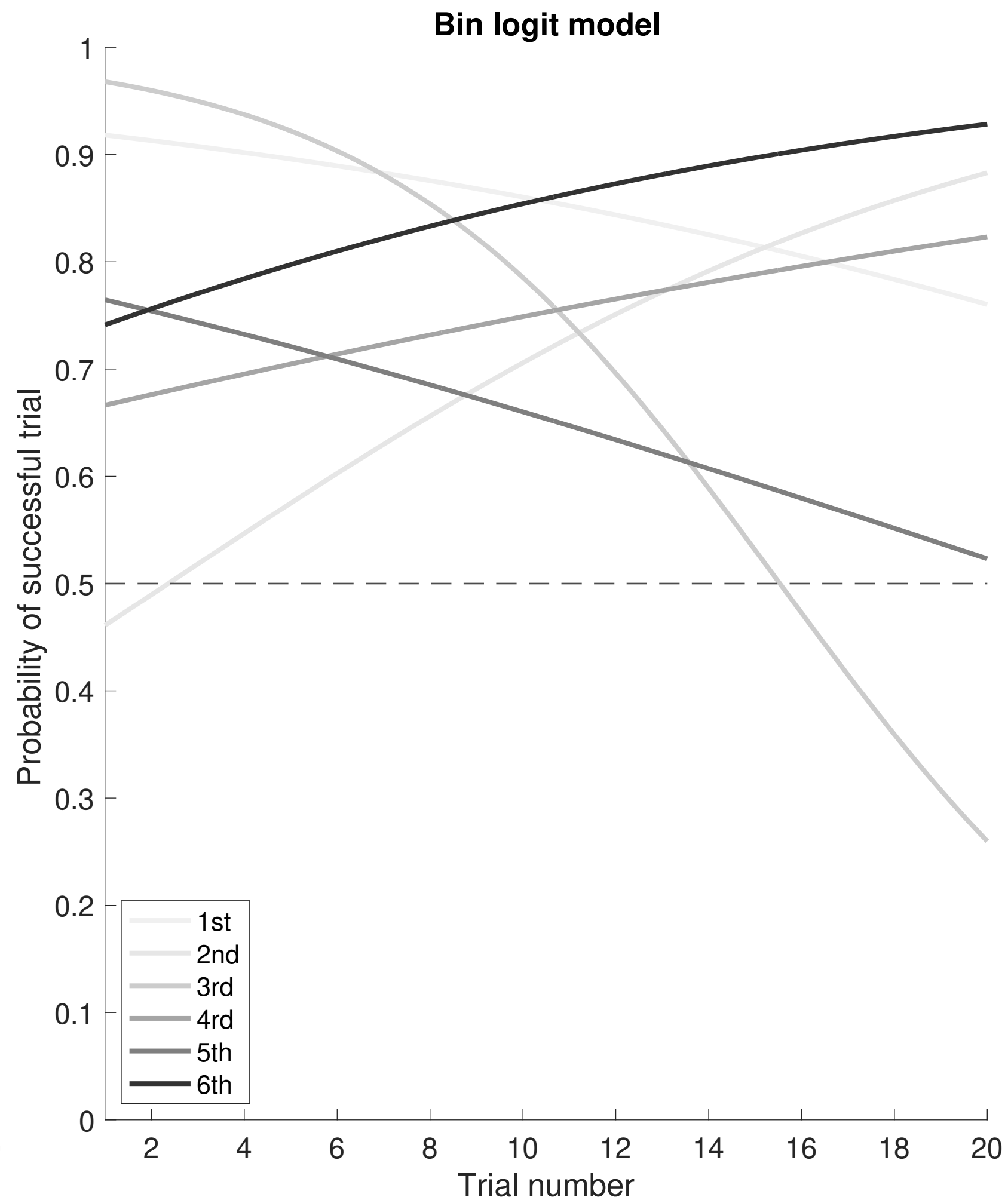
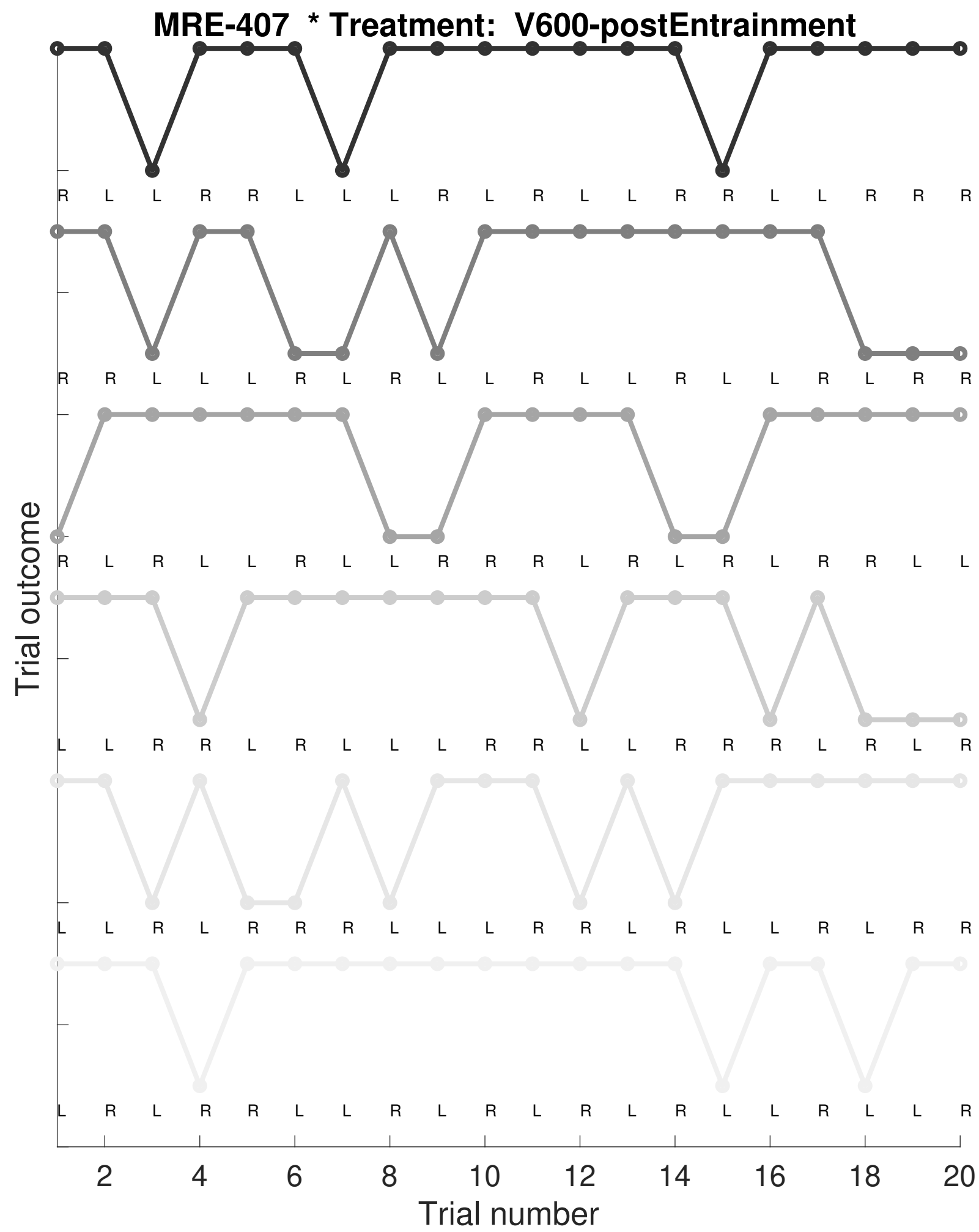




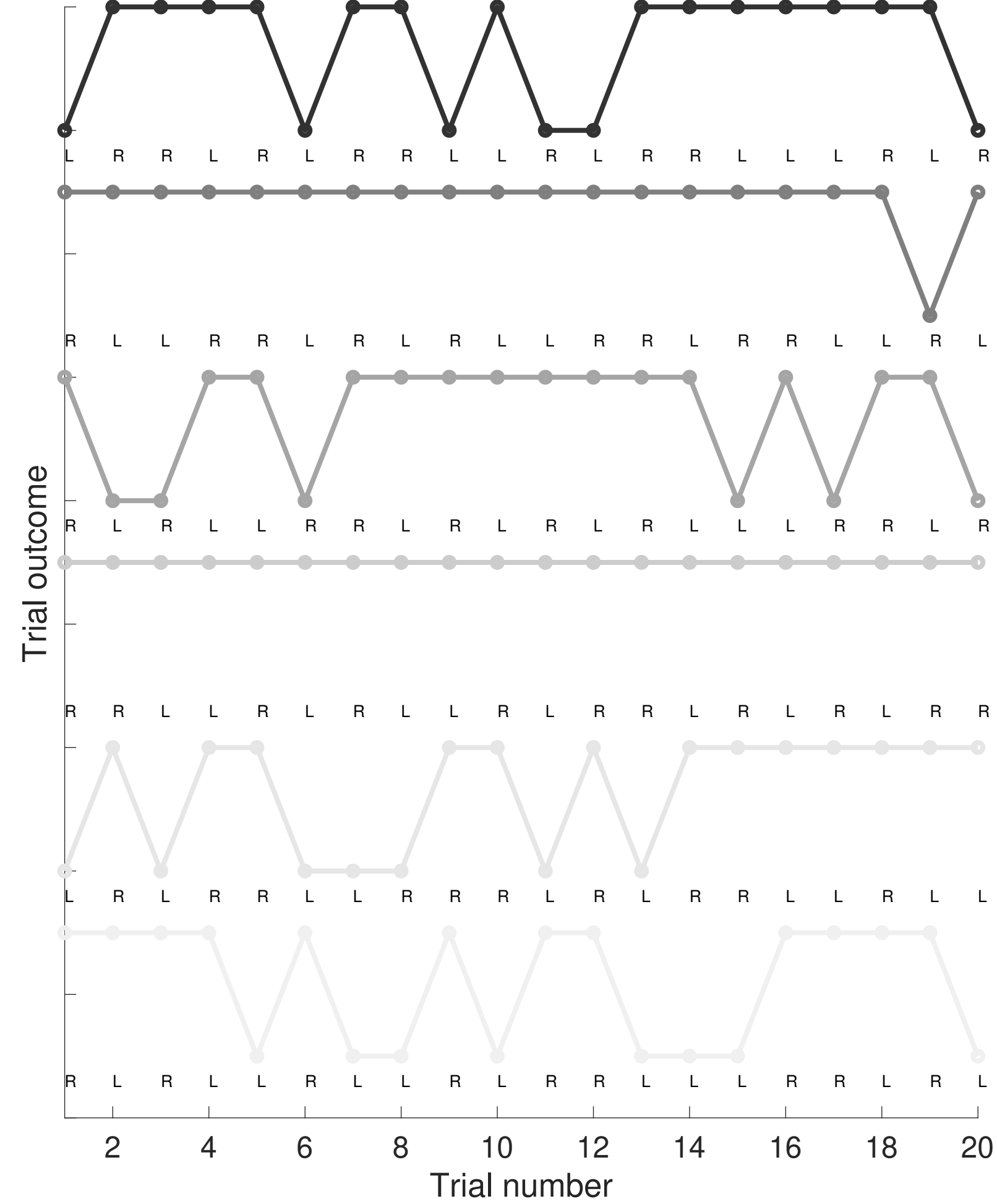




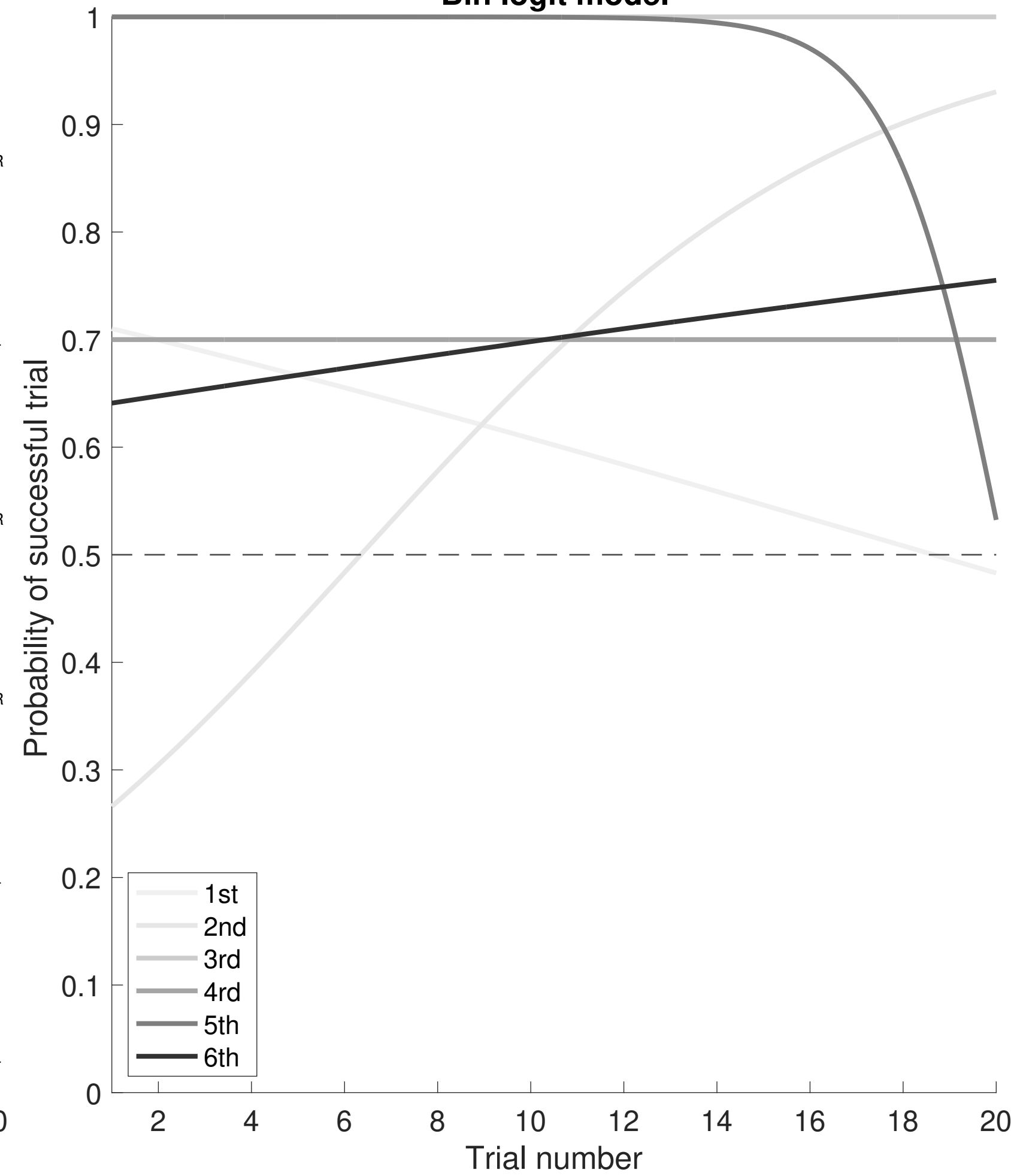




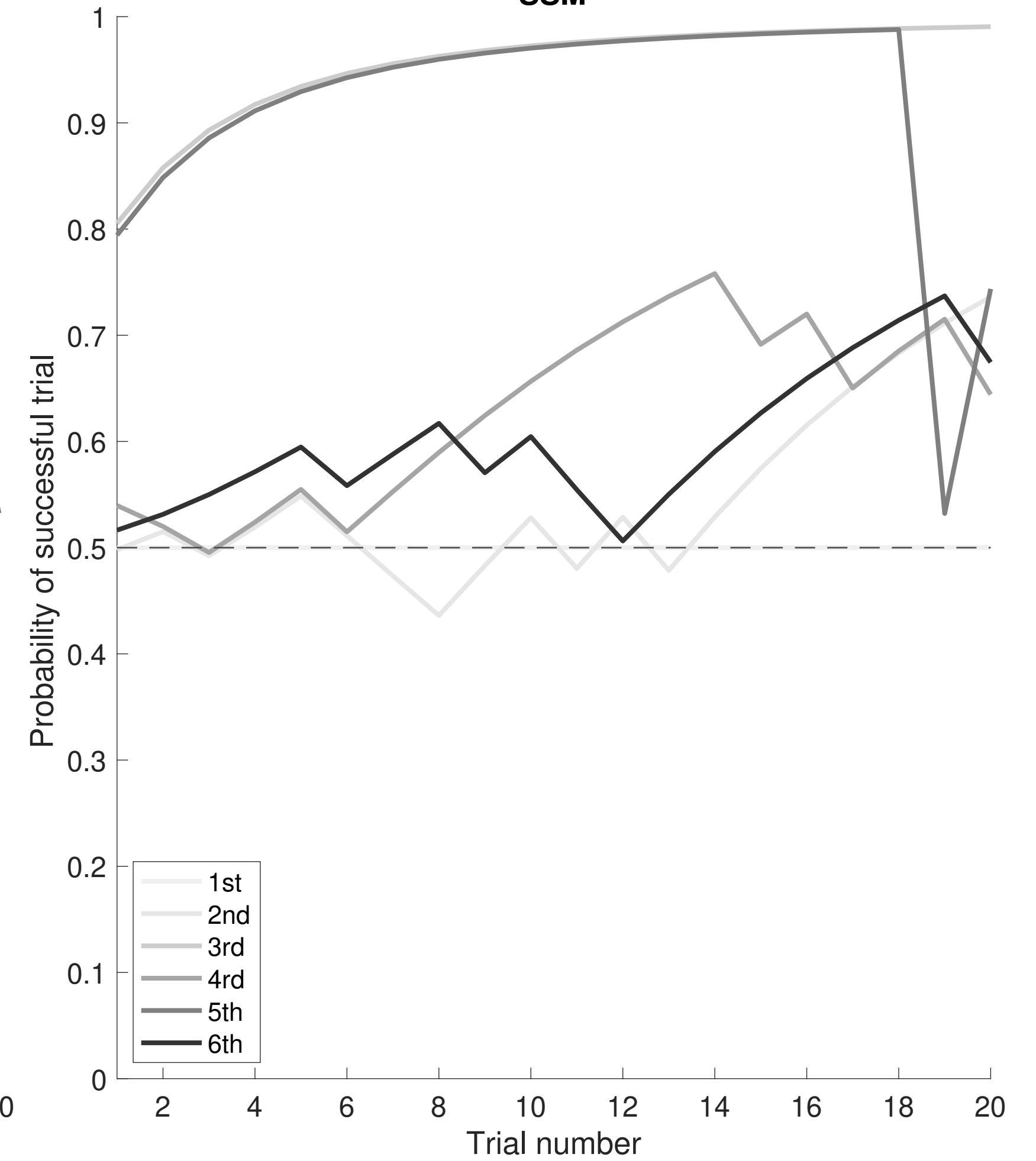
MRE-408 * Treatment: V600

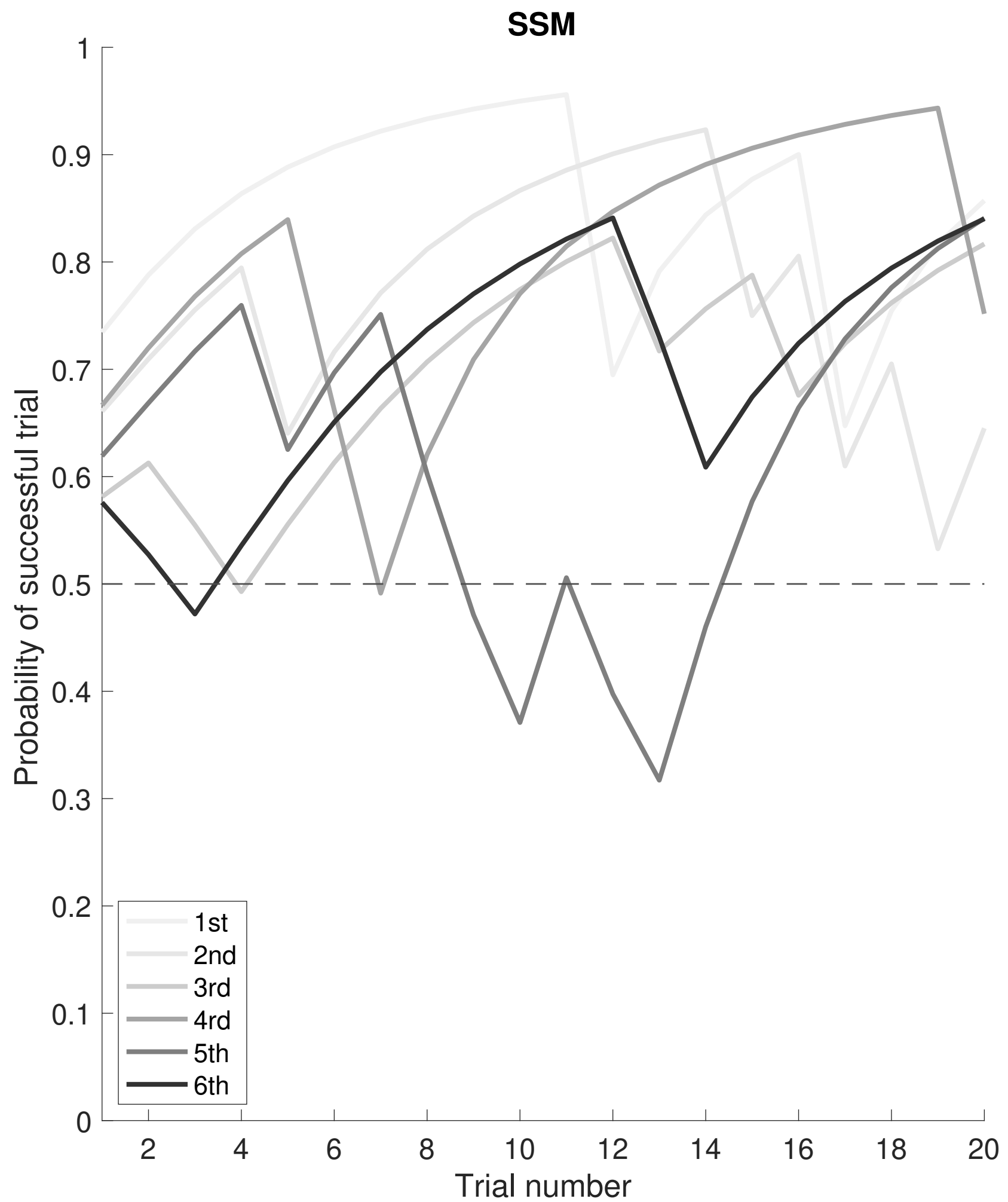
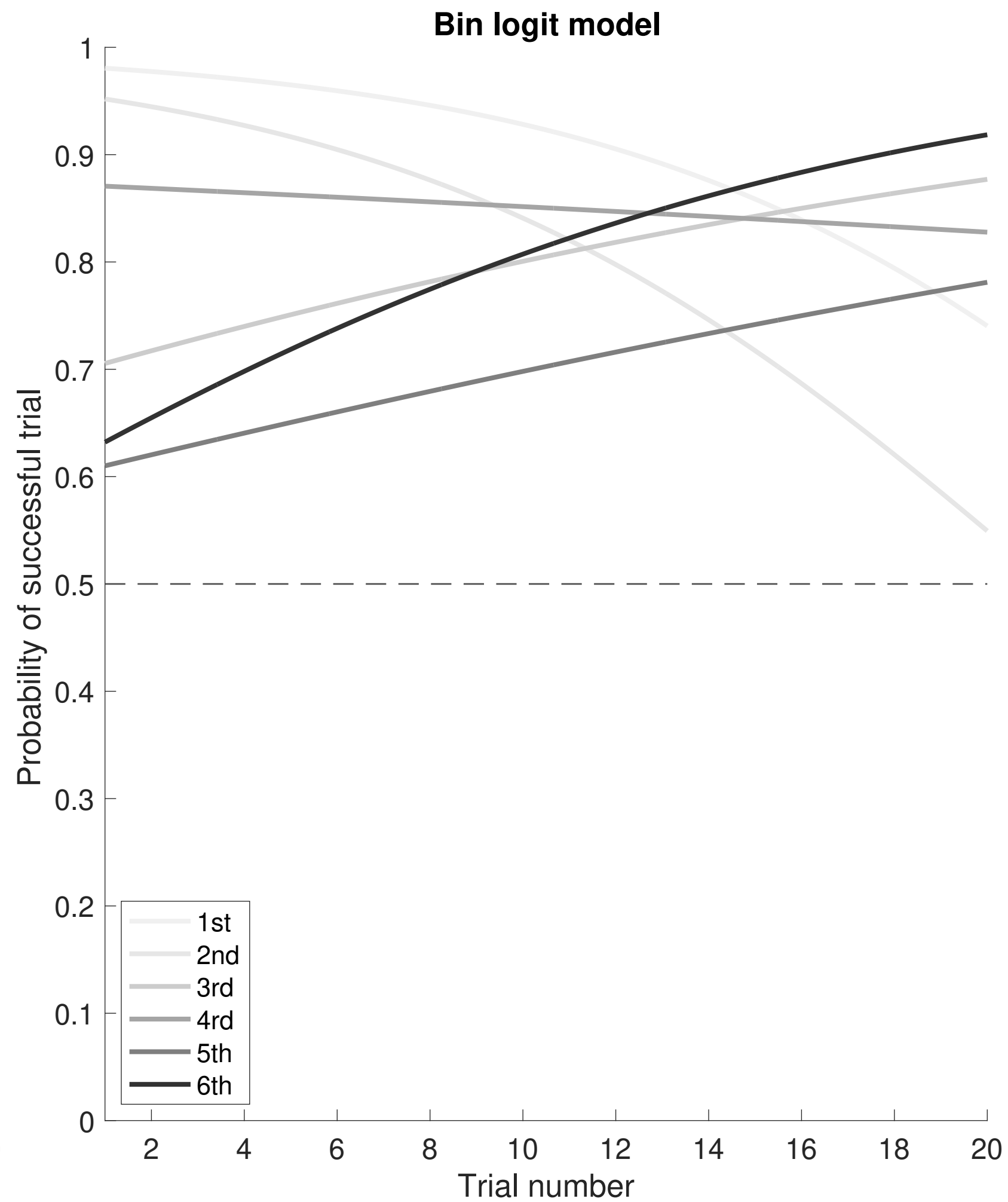
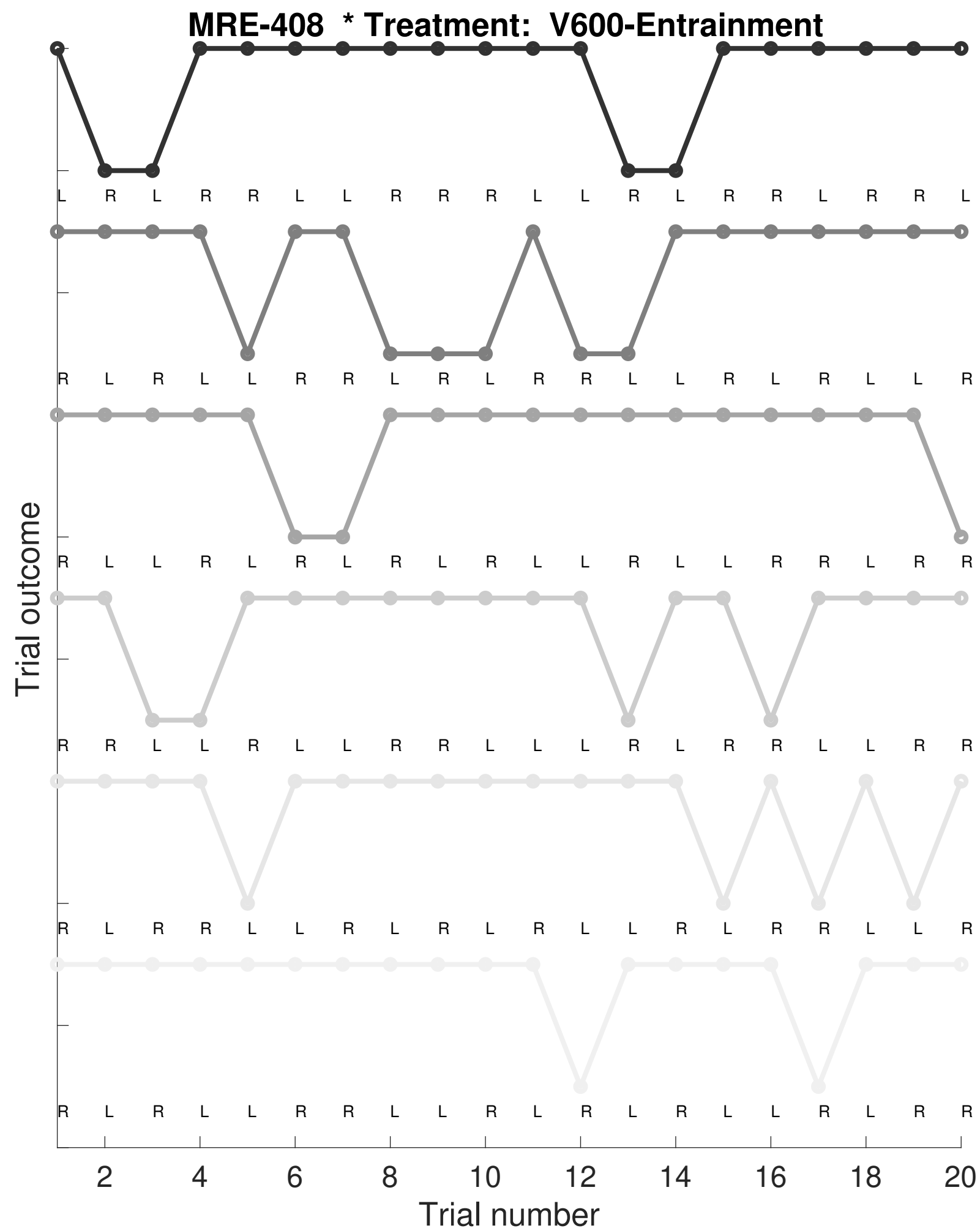


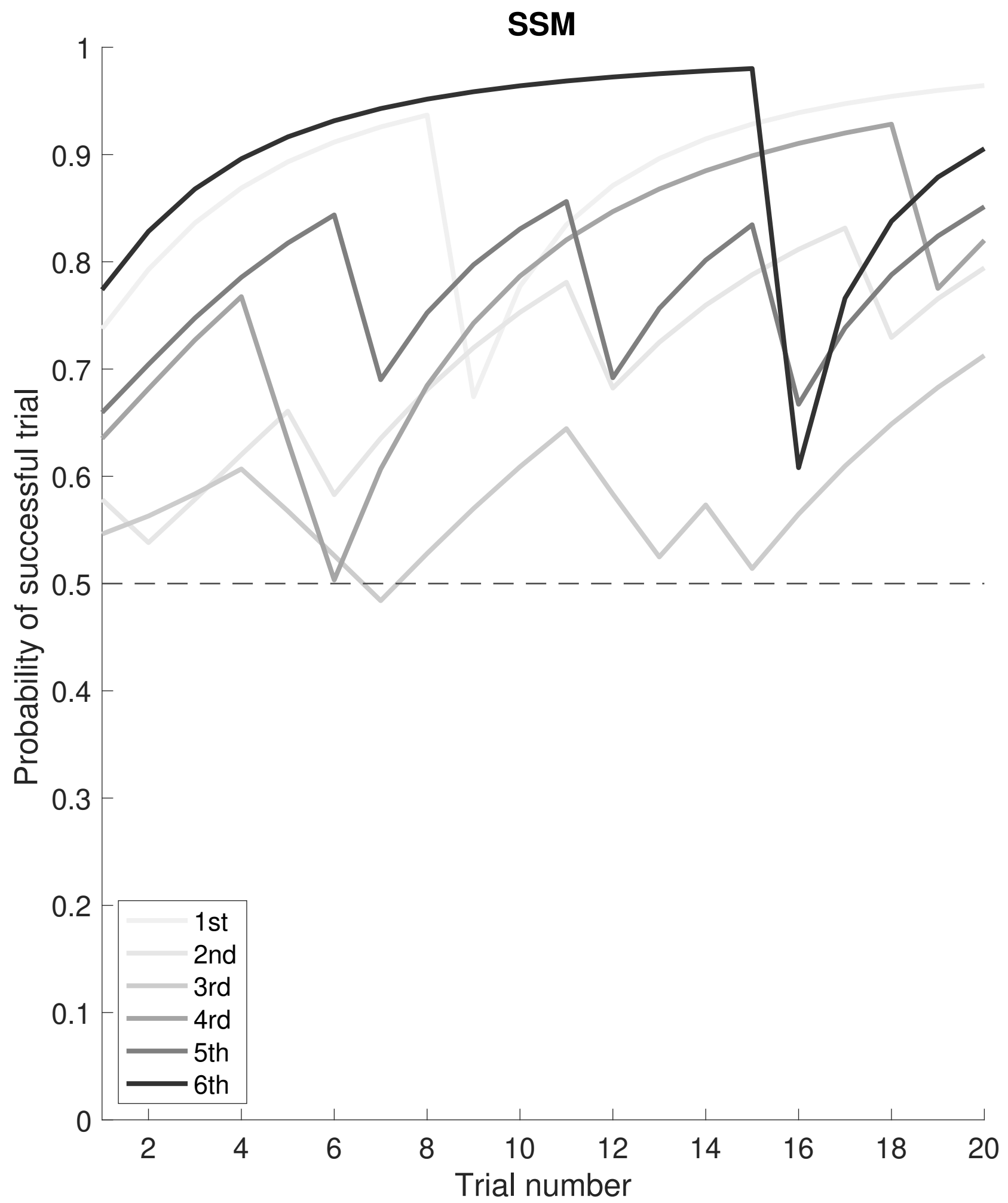
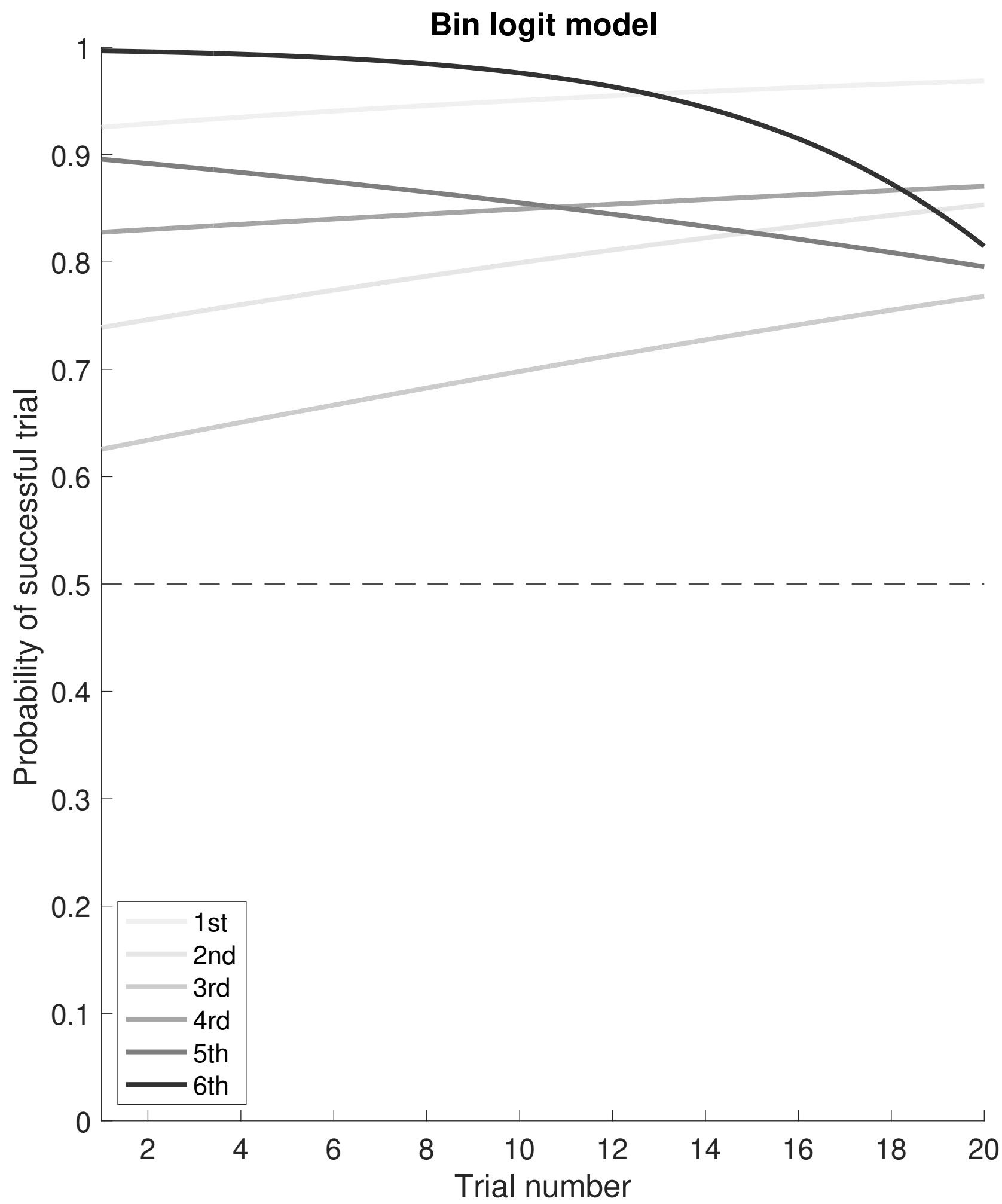
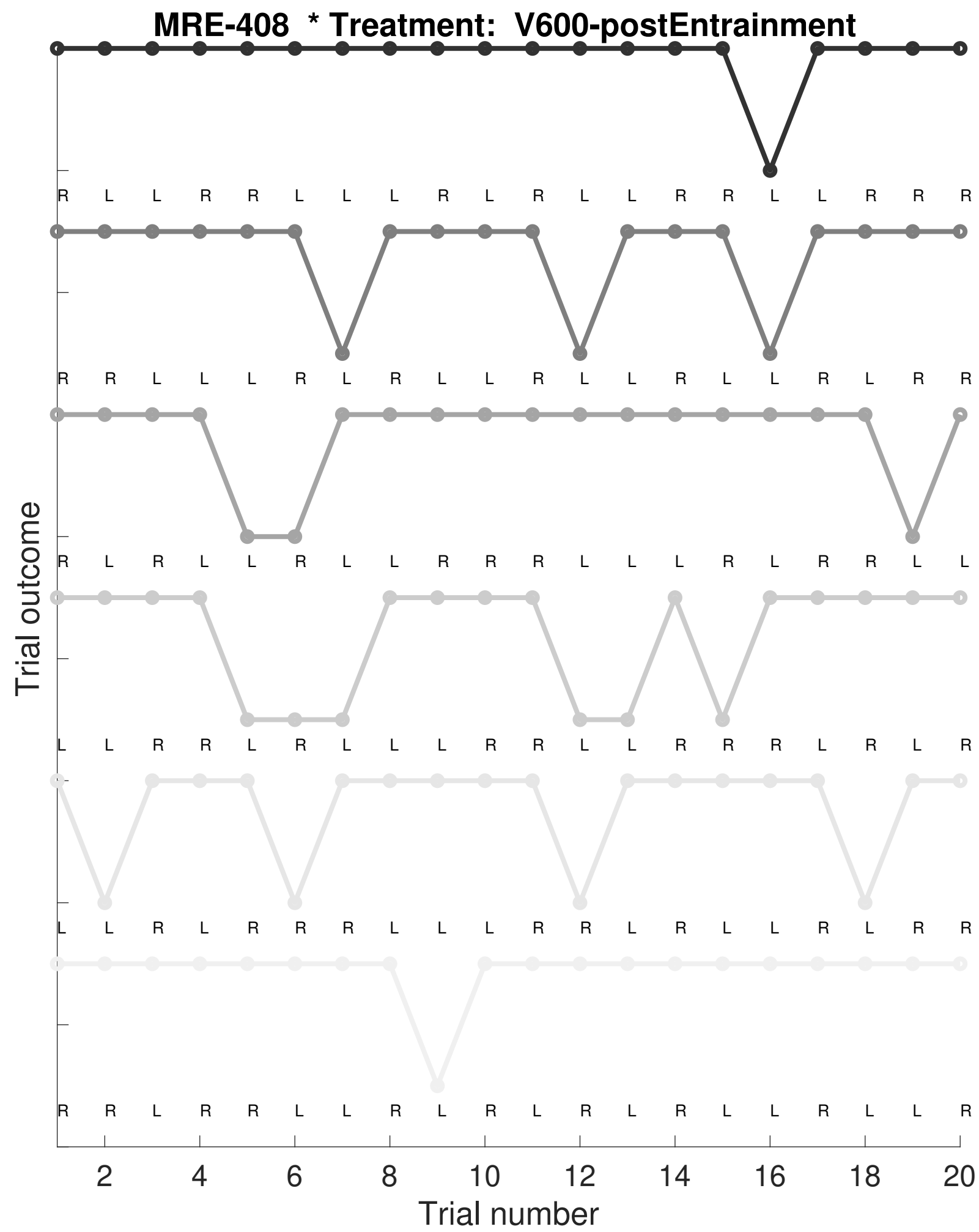
Bin logit model

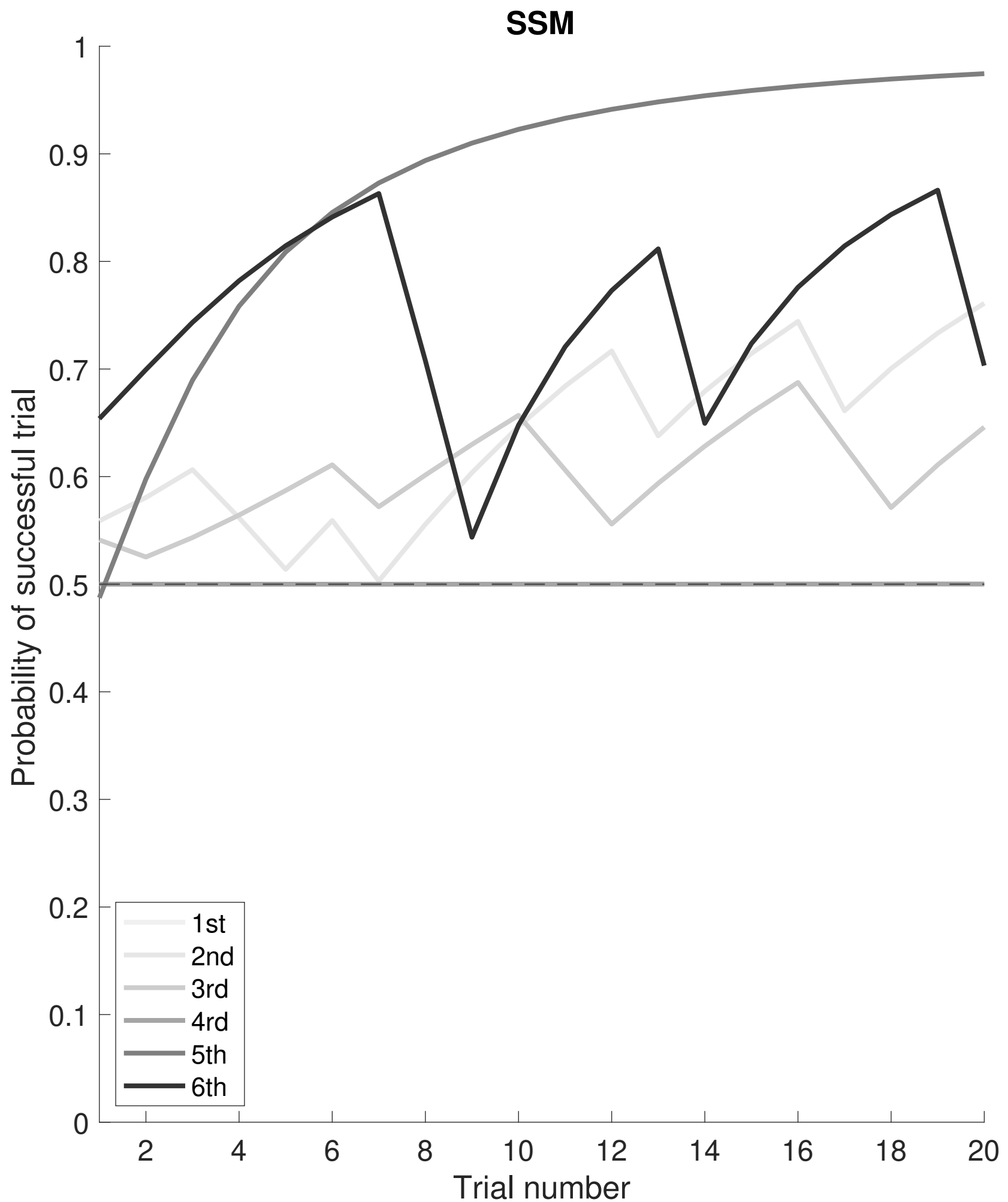
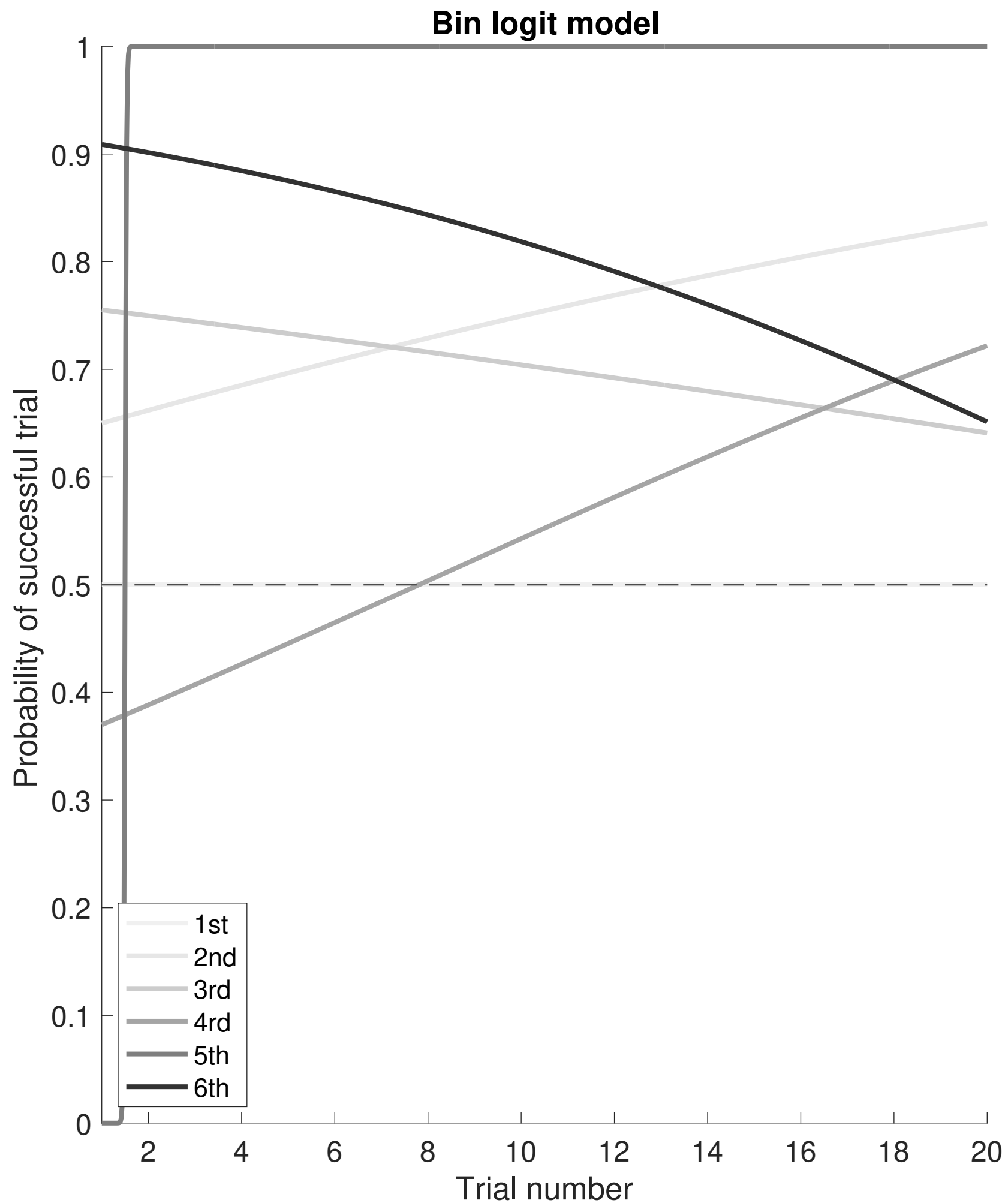
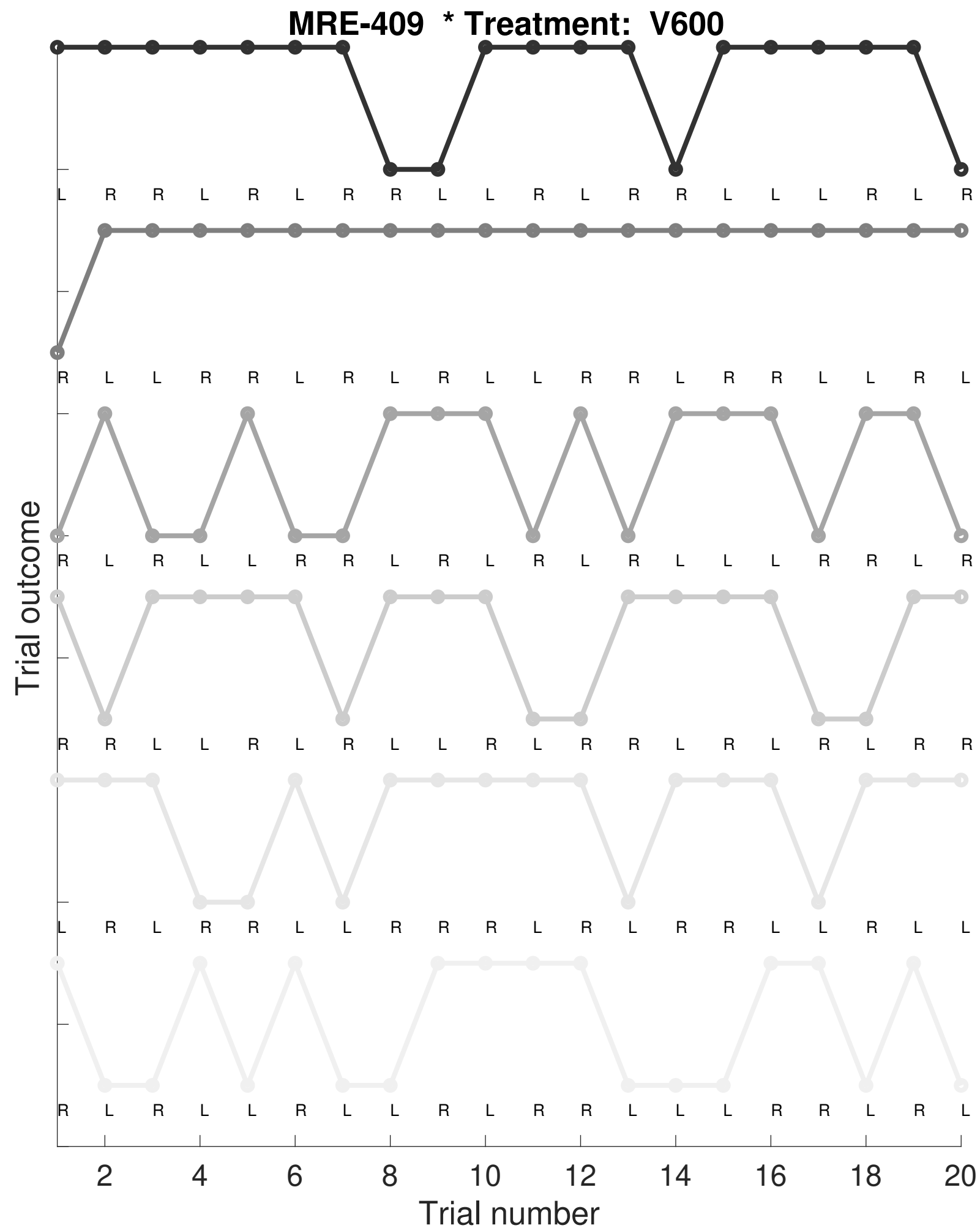


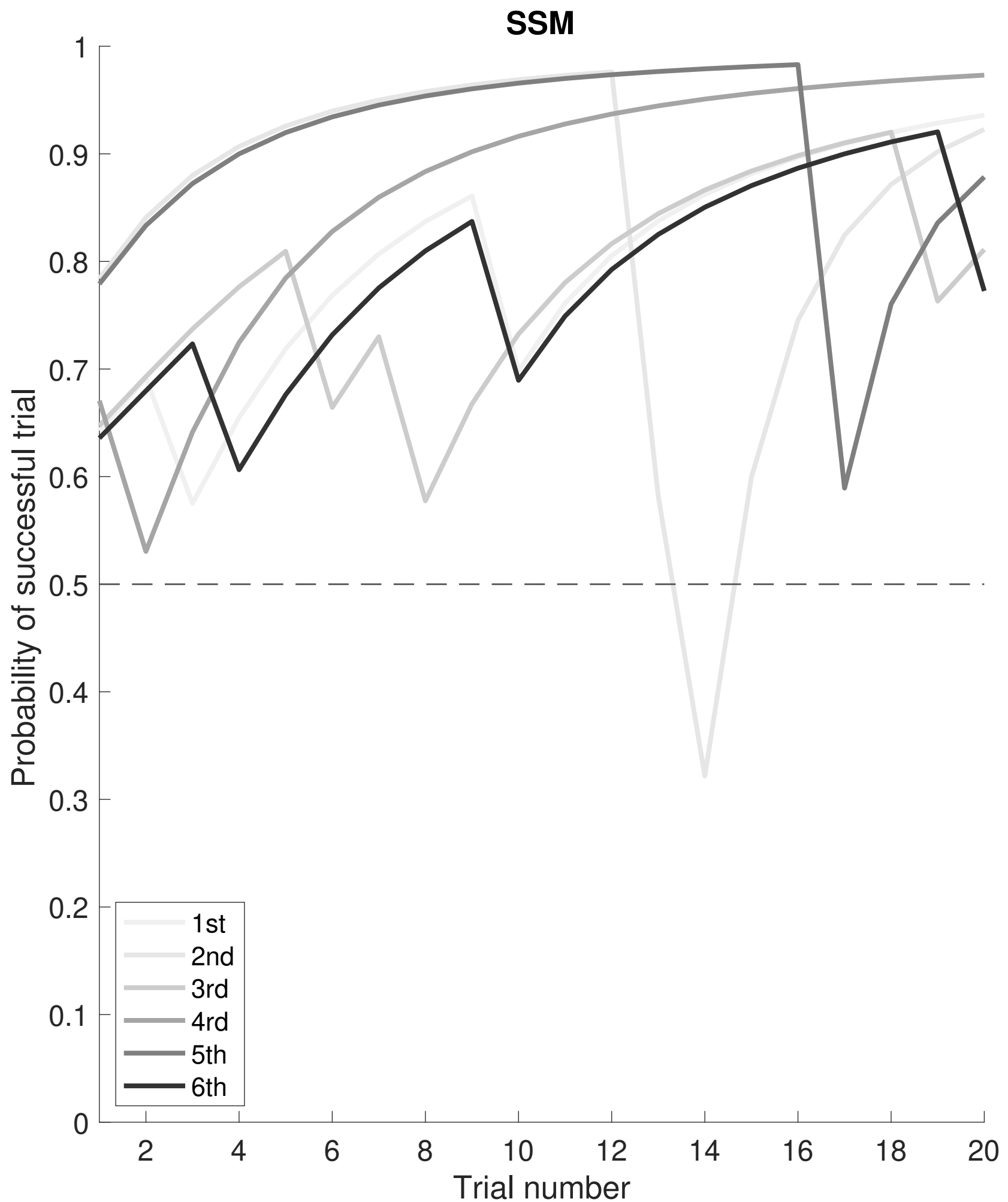
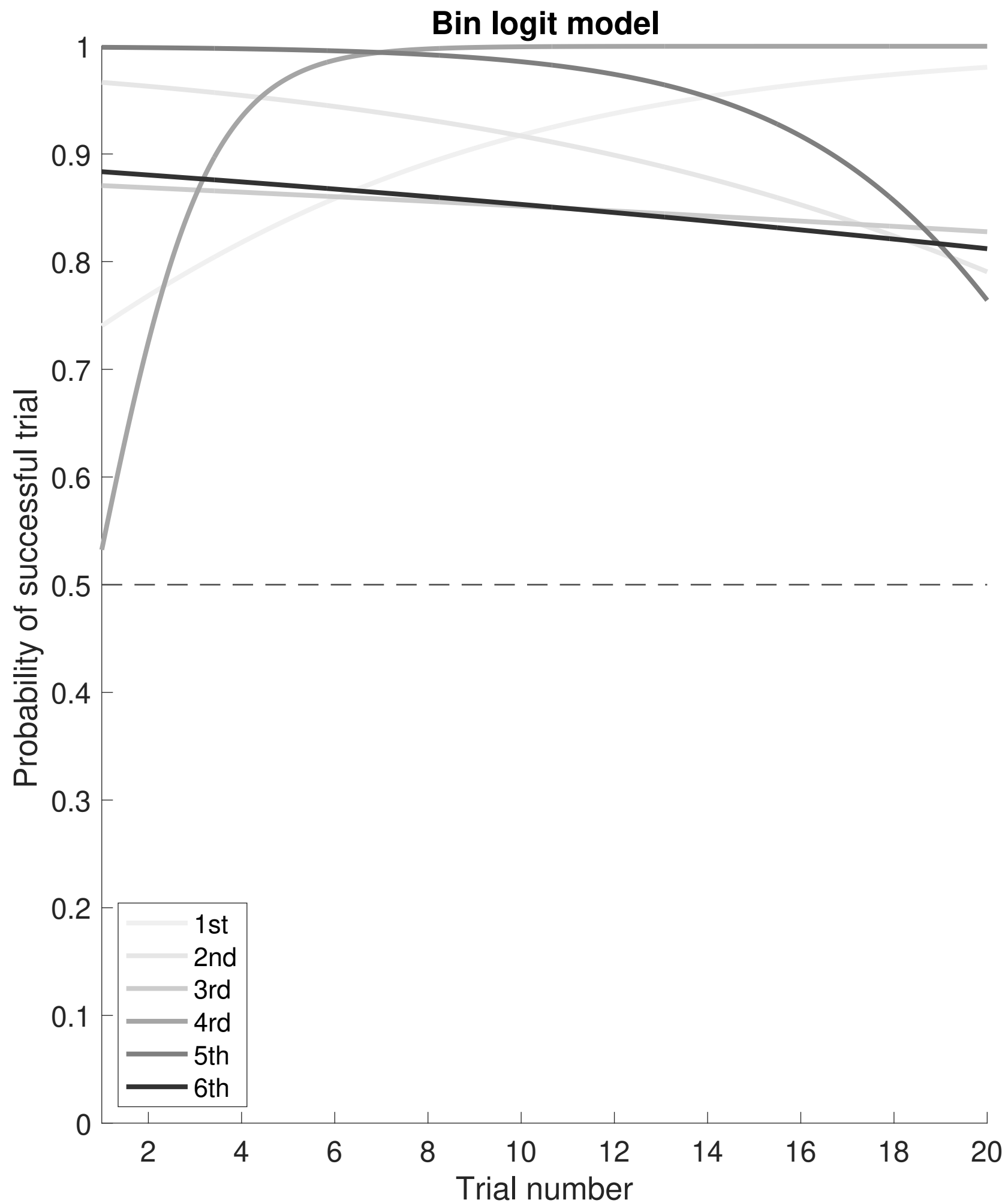
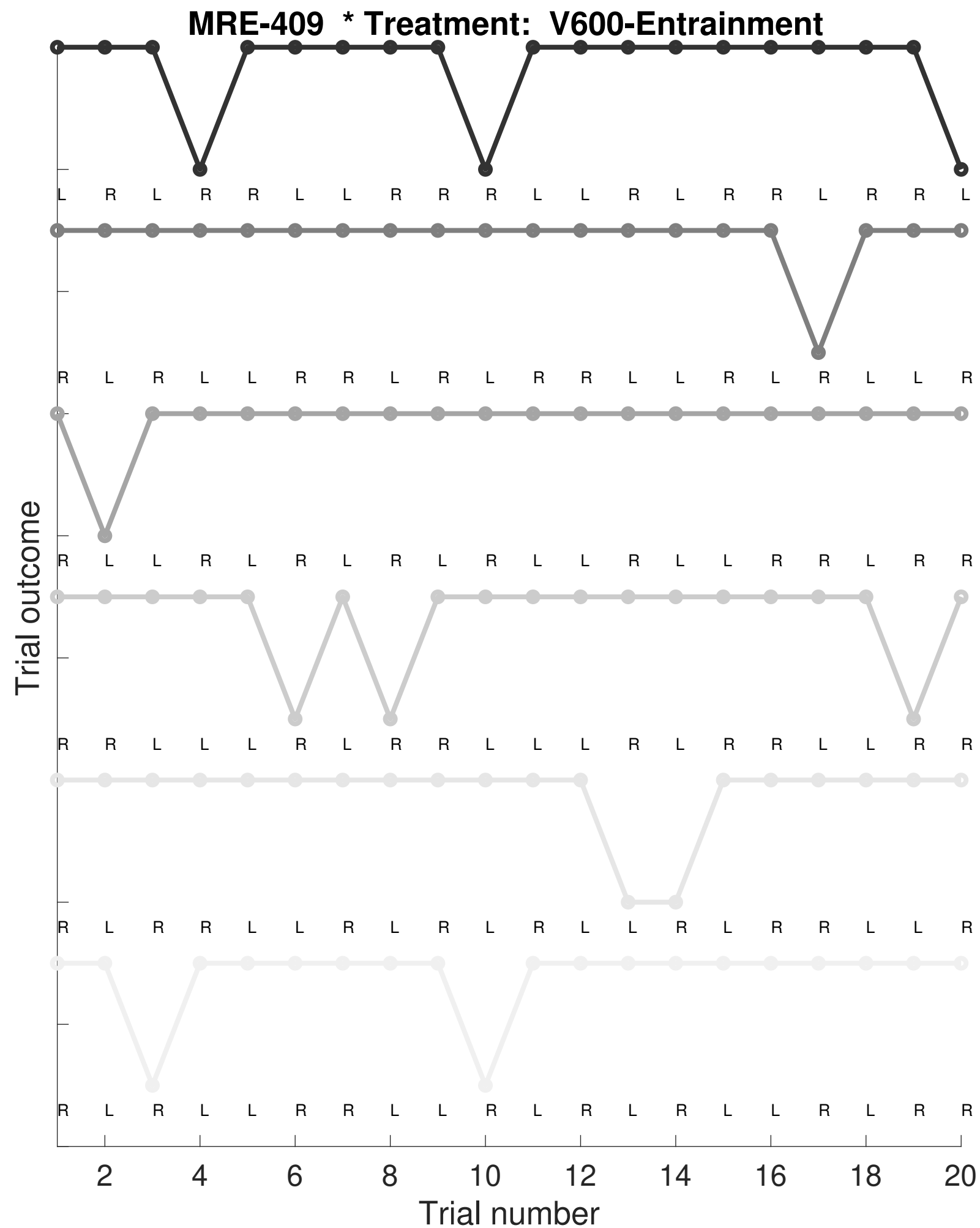
SSM

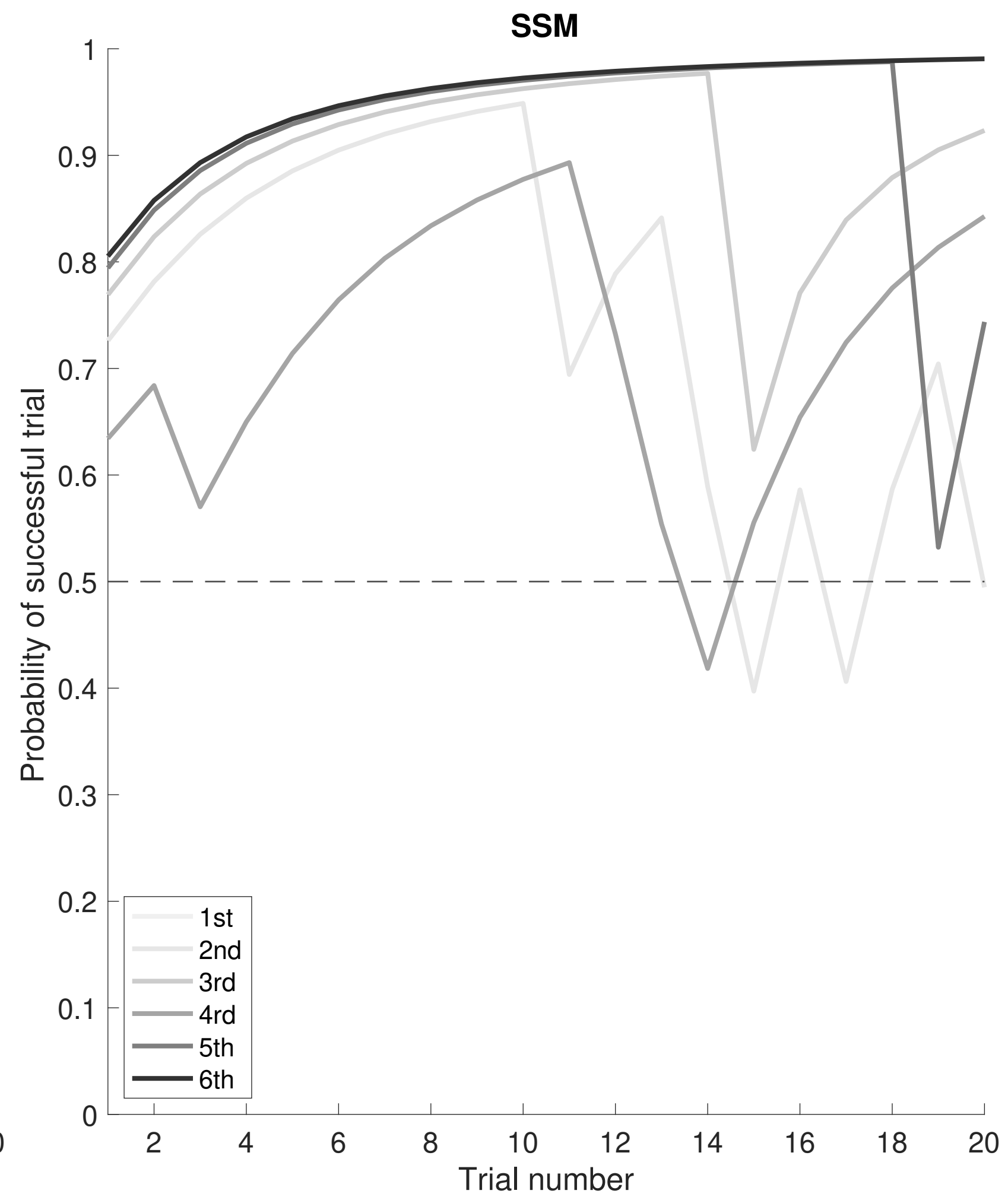
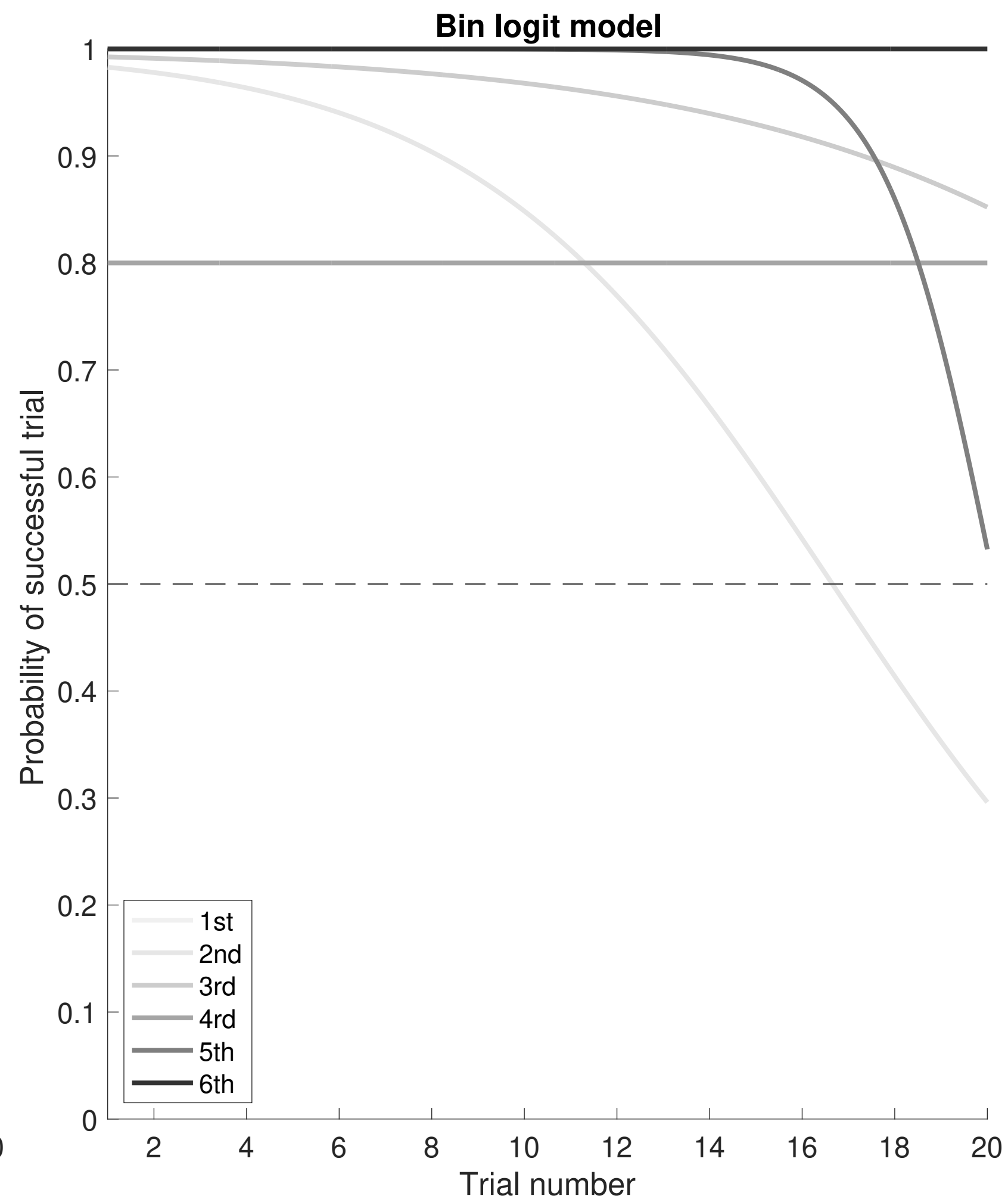
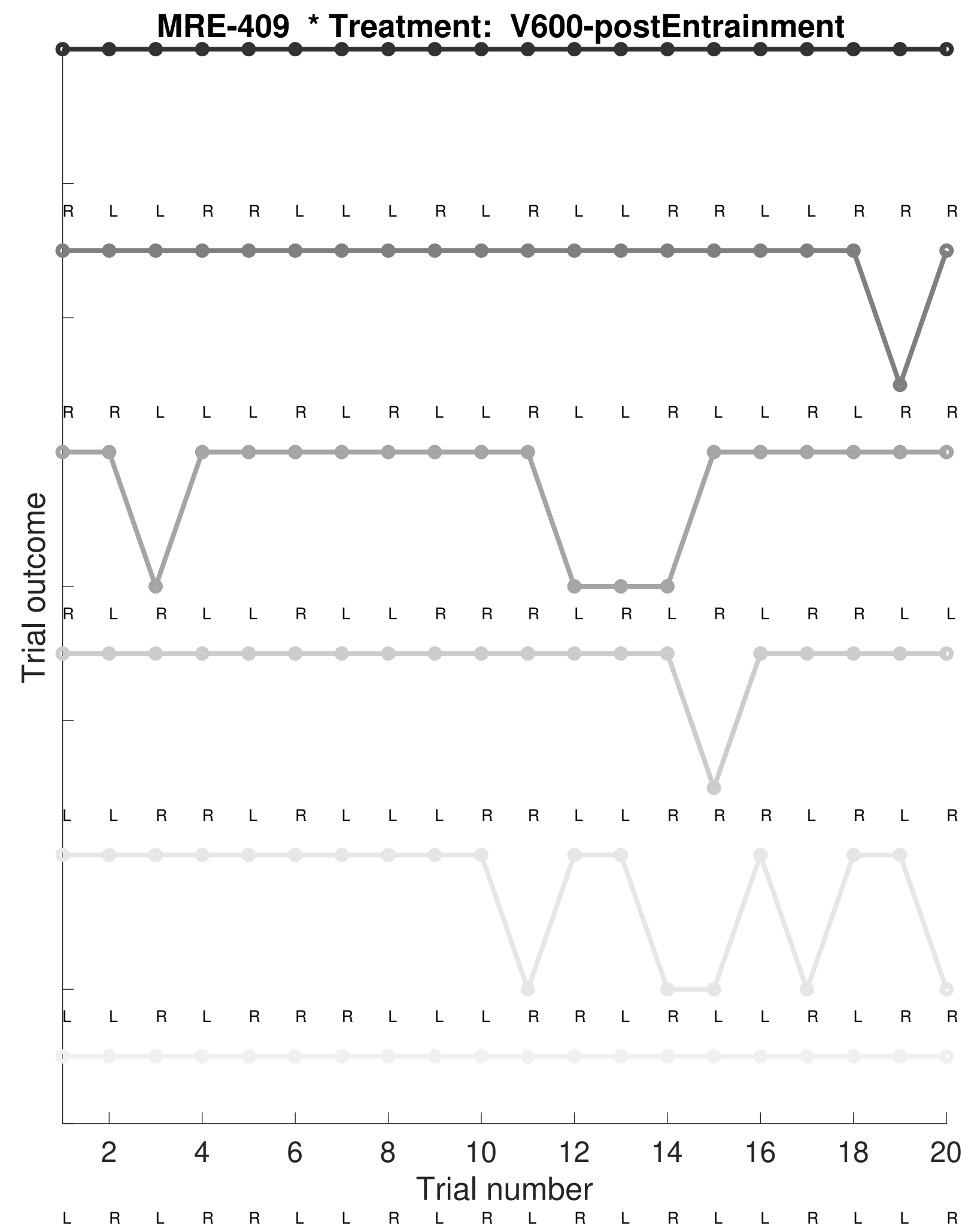




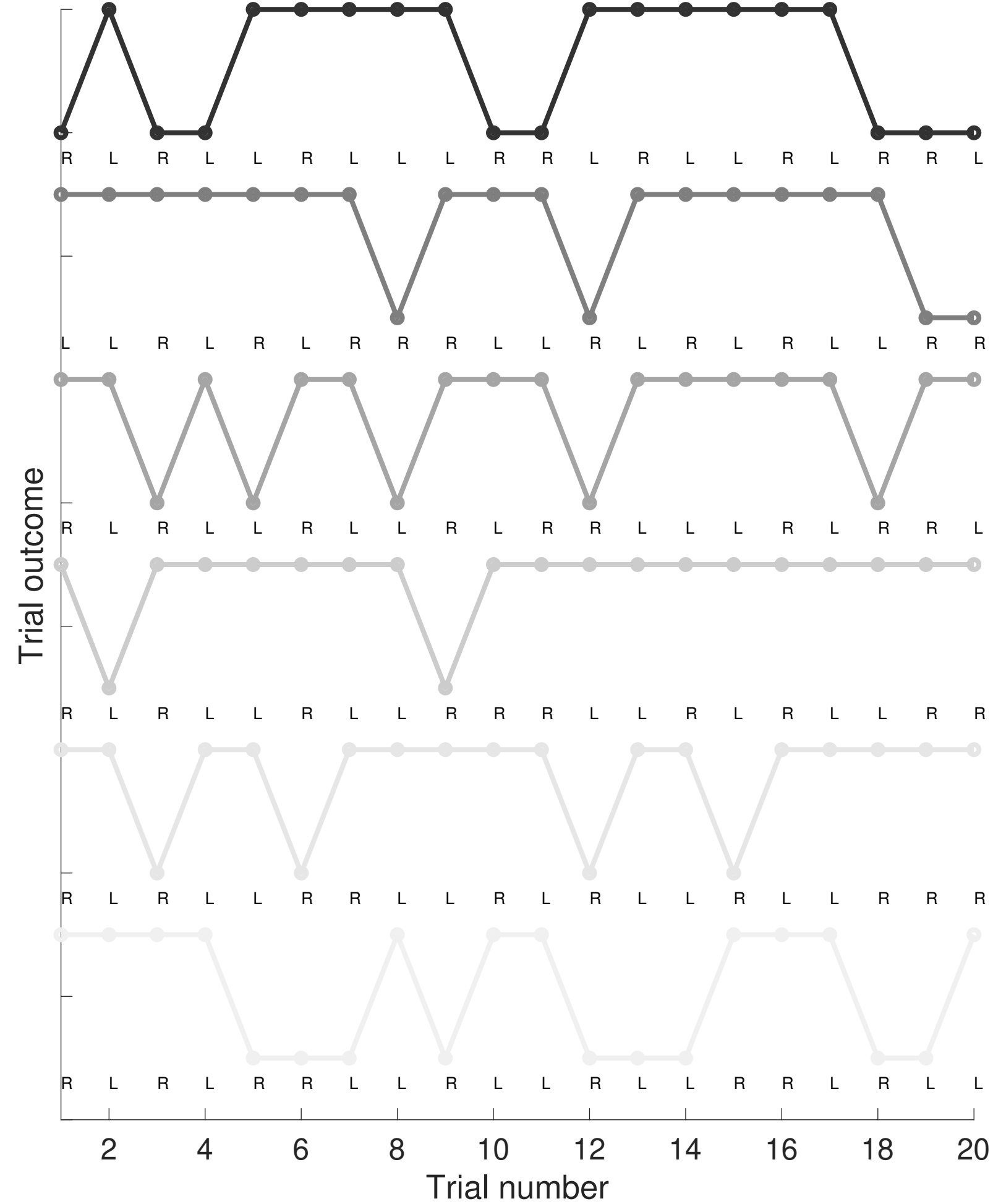




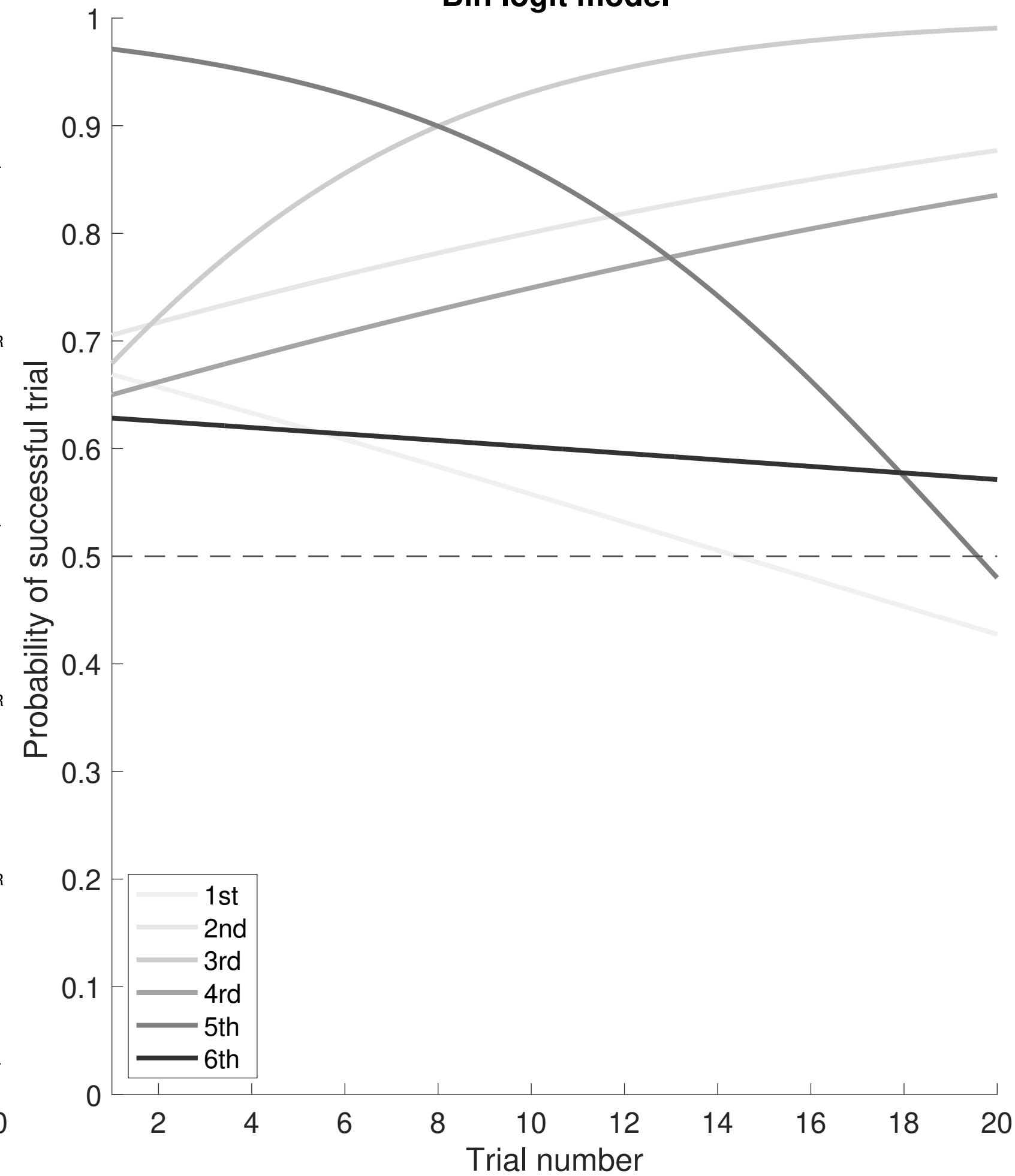




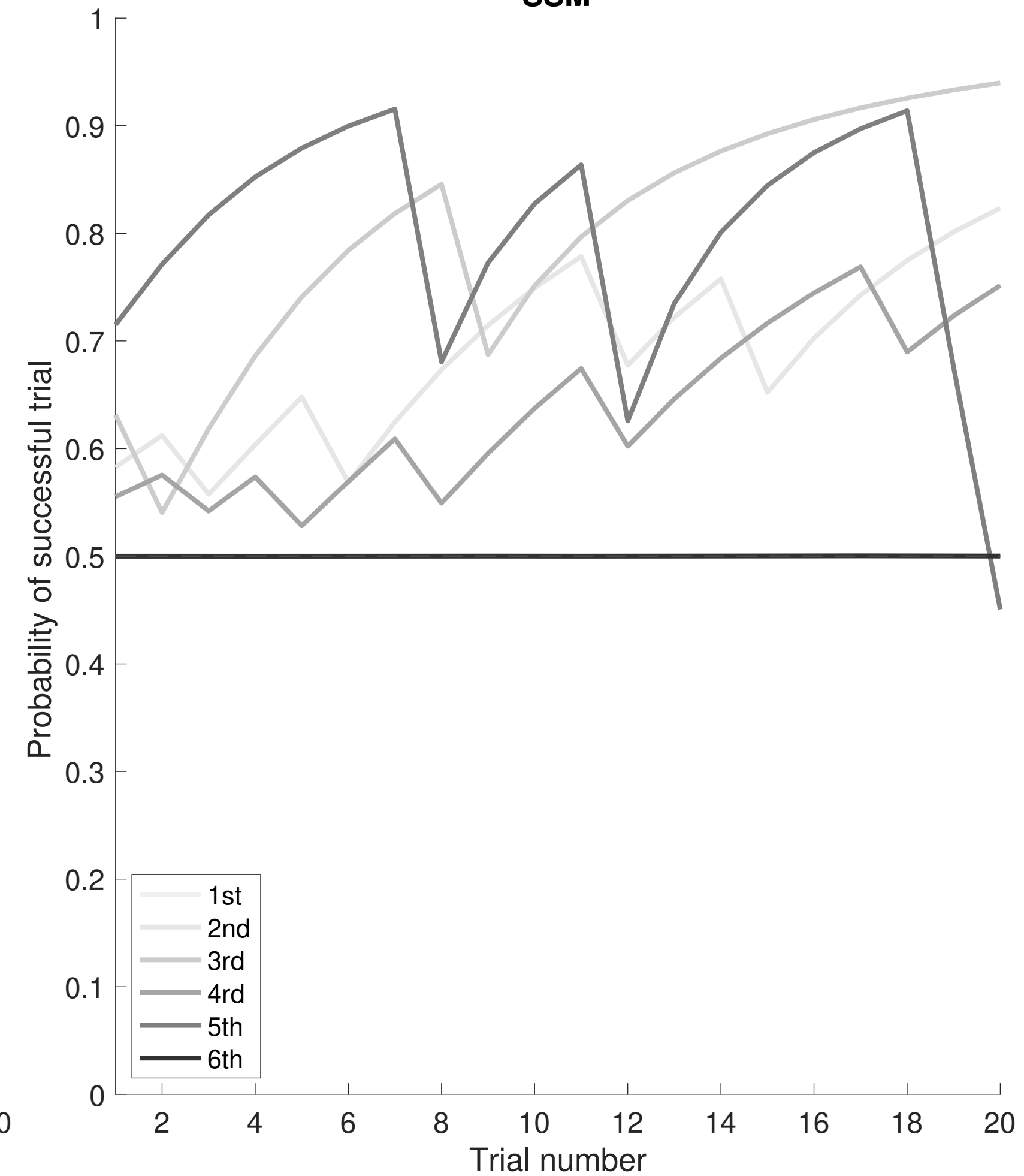
MRE-410 * Treatment: V600

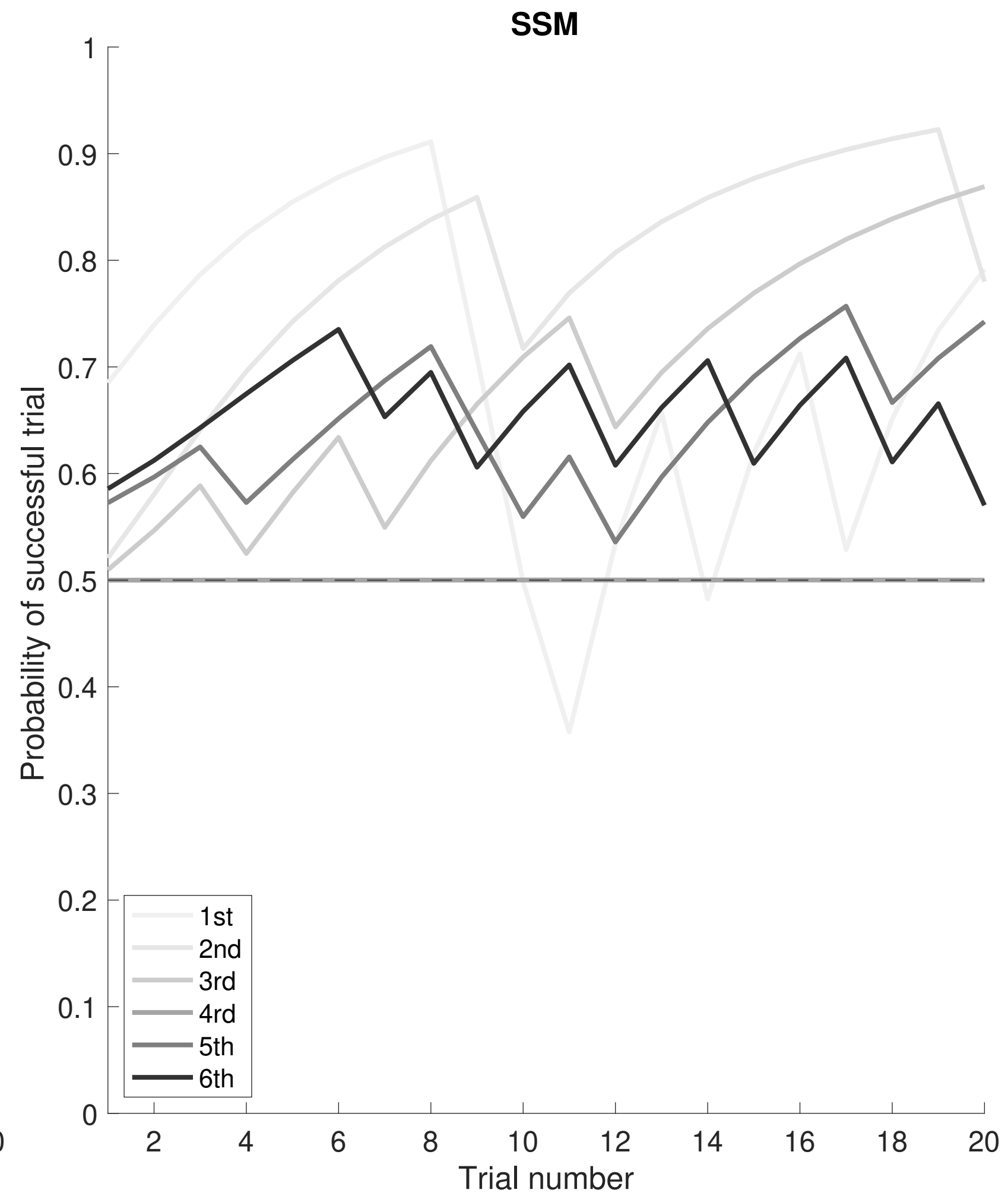
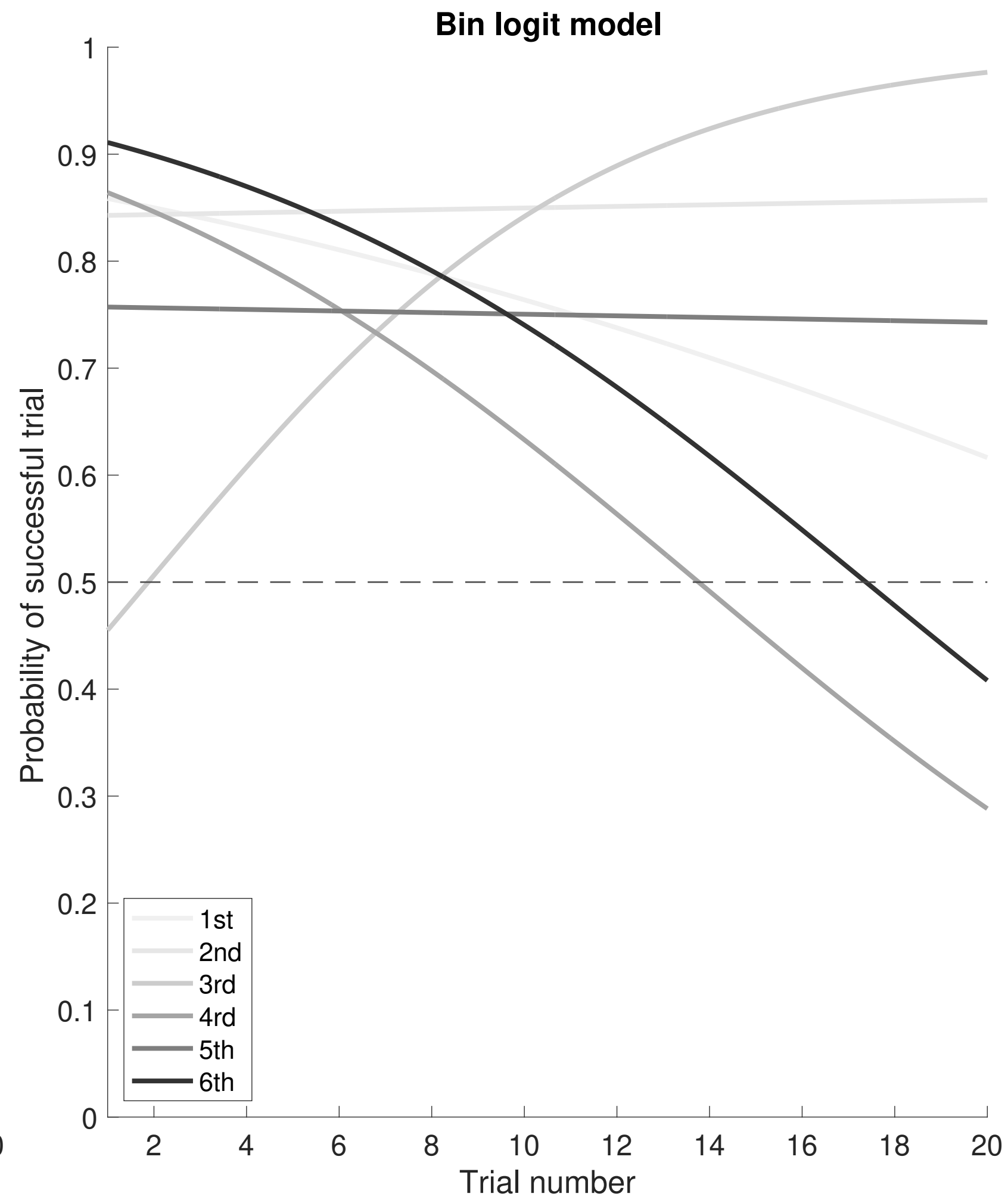
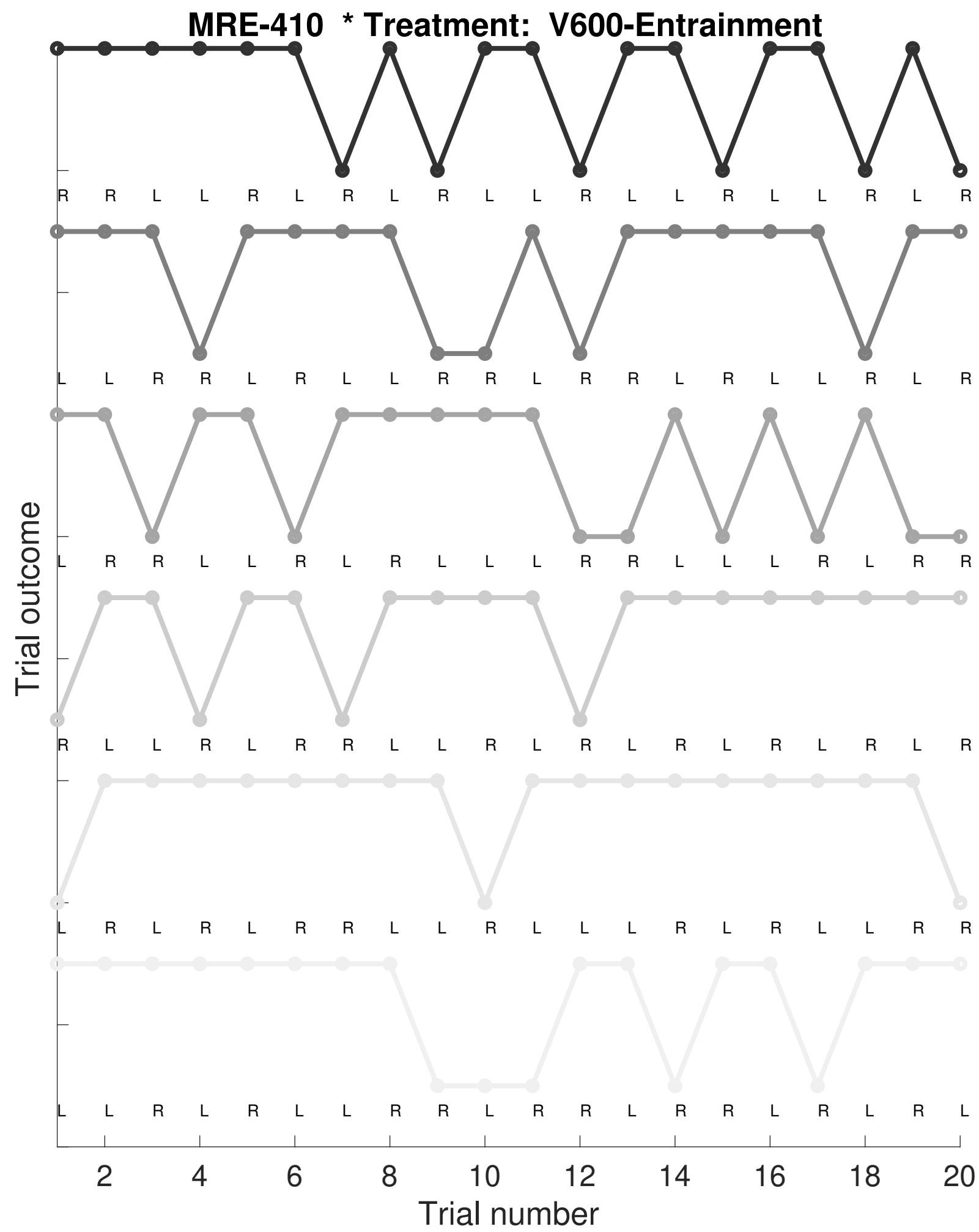


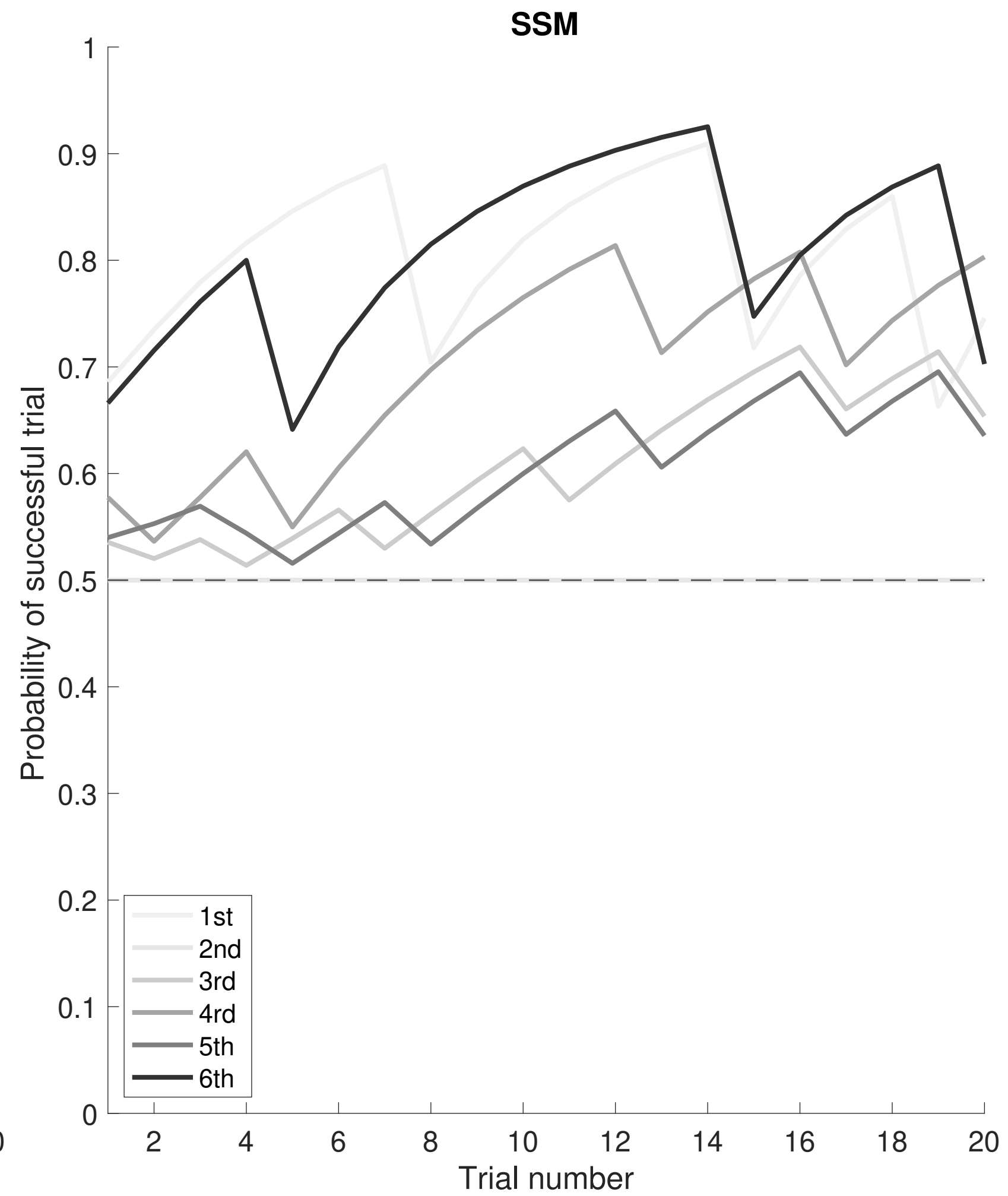
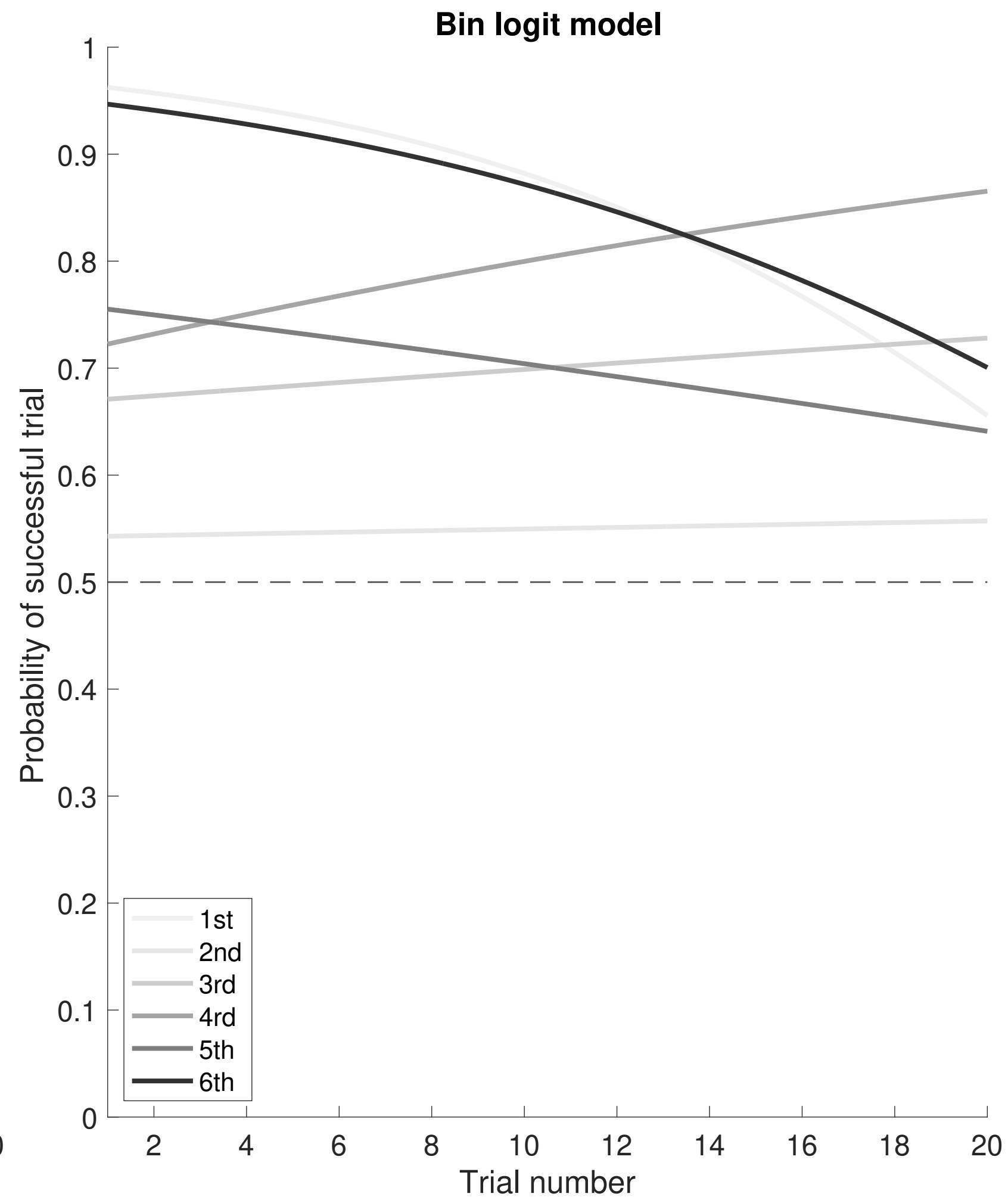
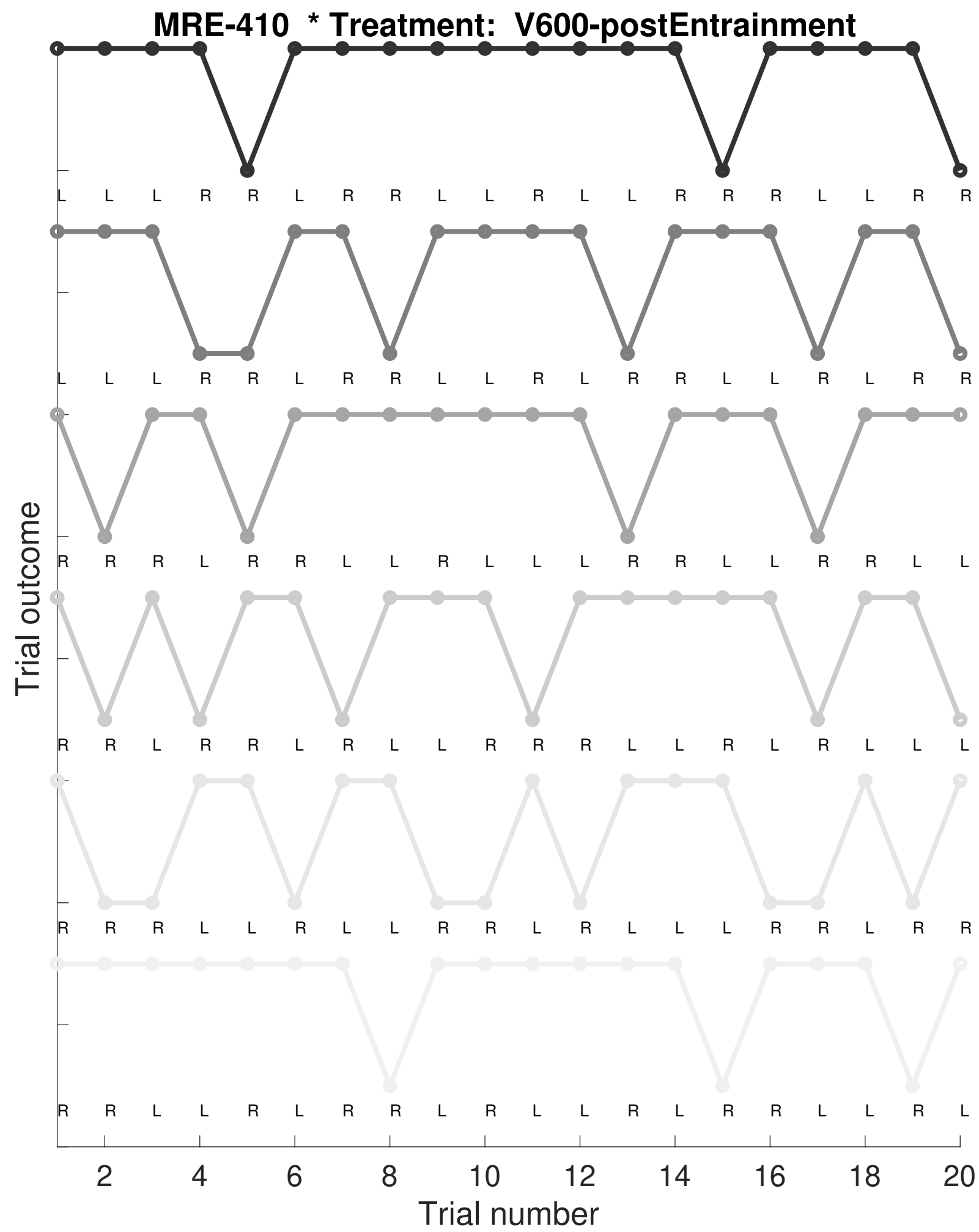
Bin logit model



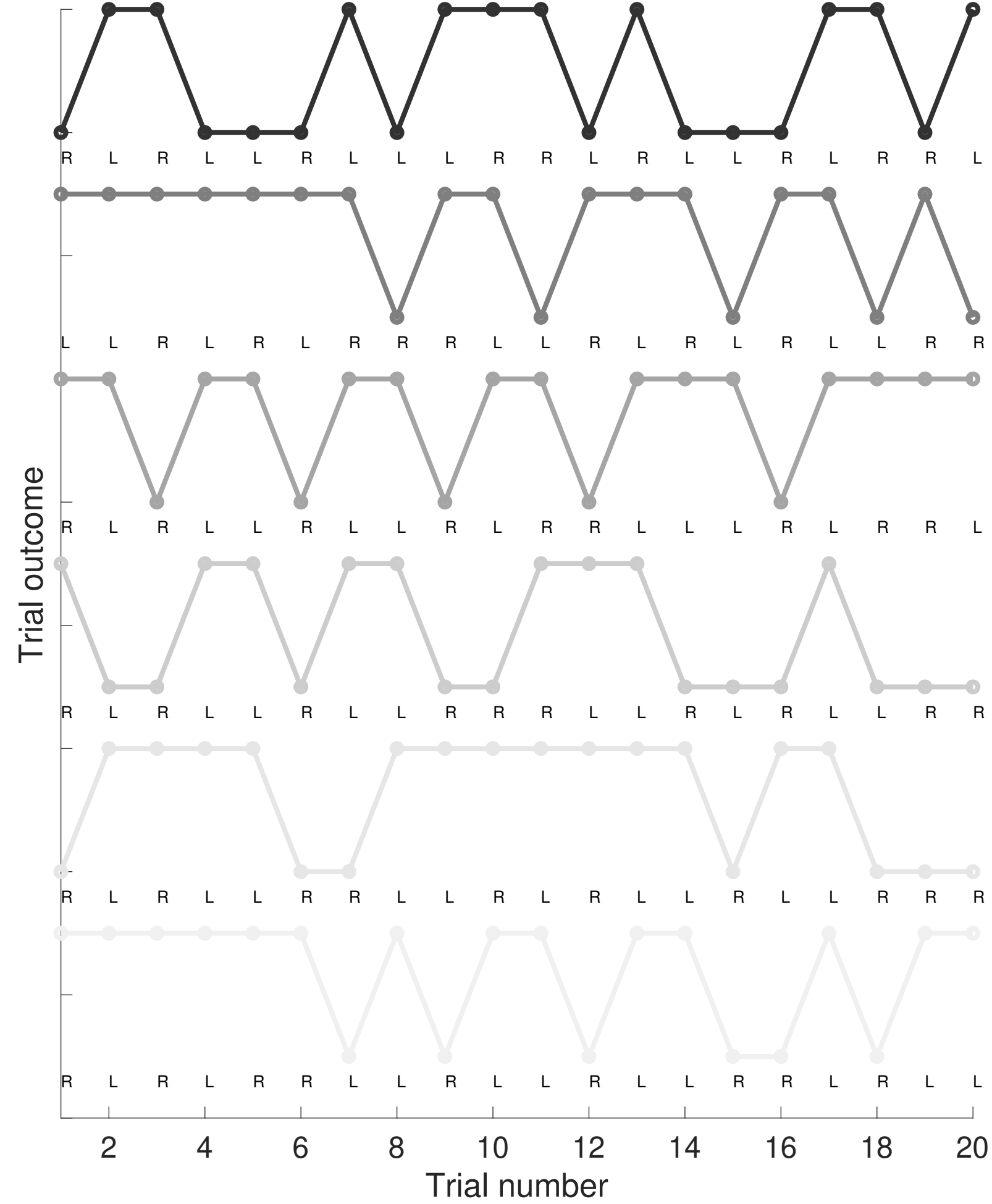
SSM



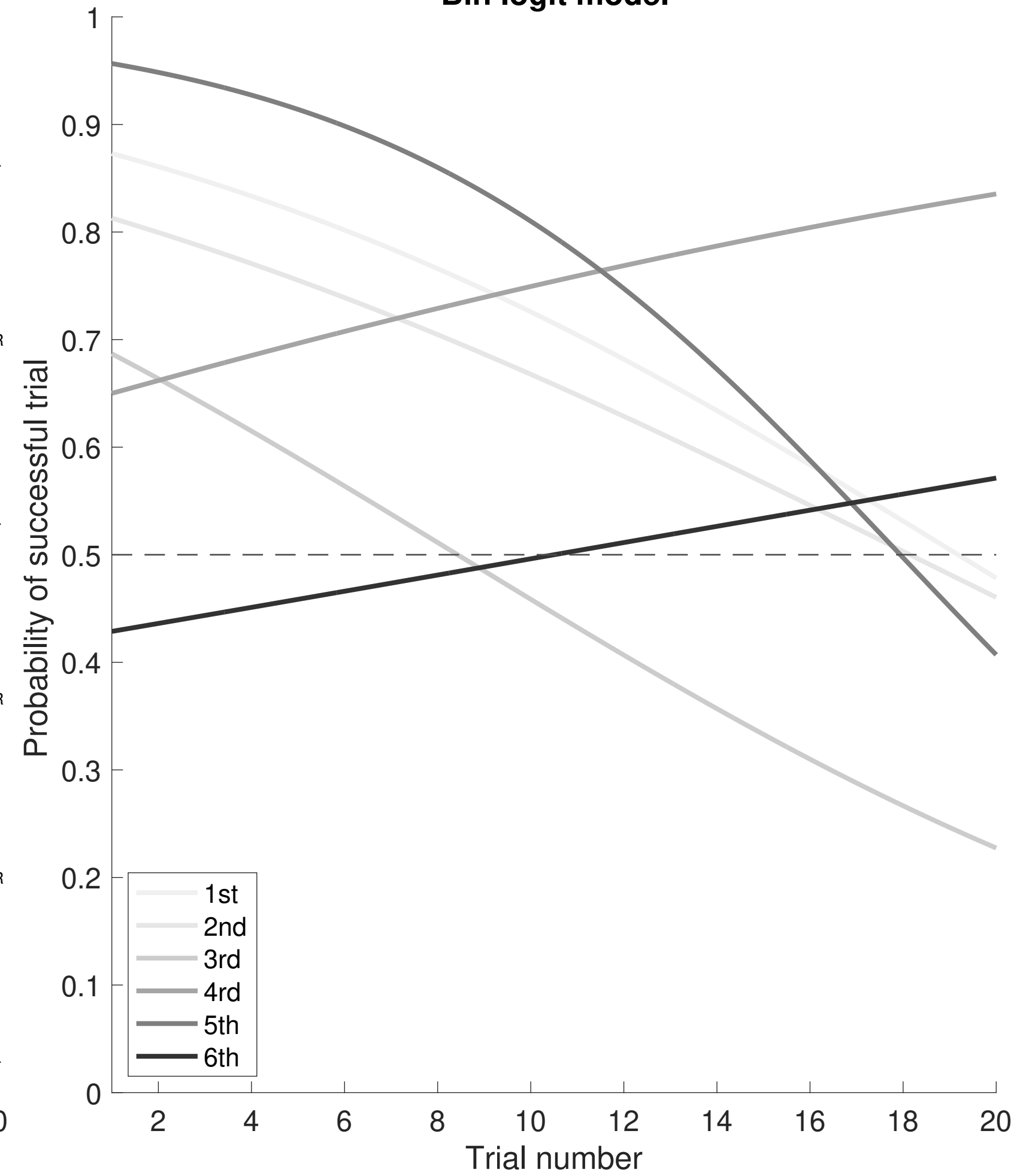




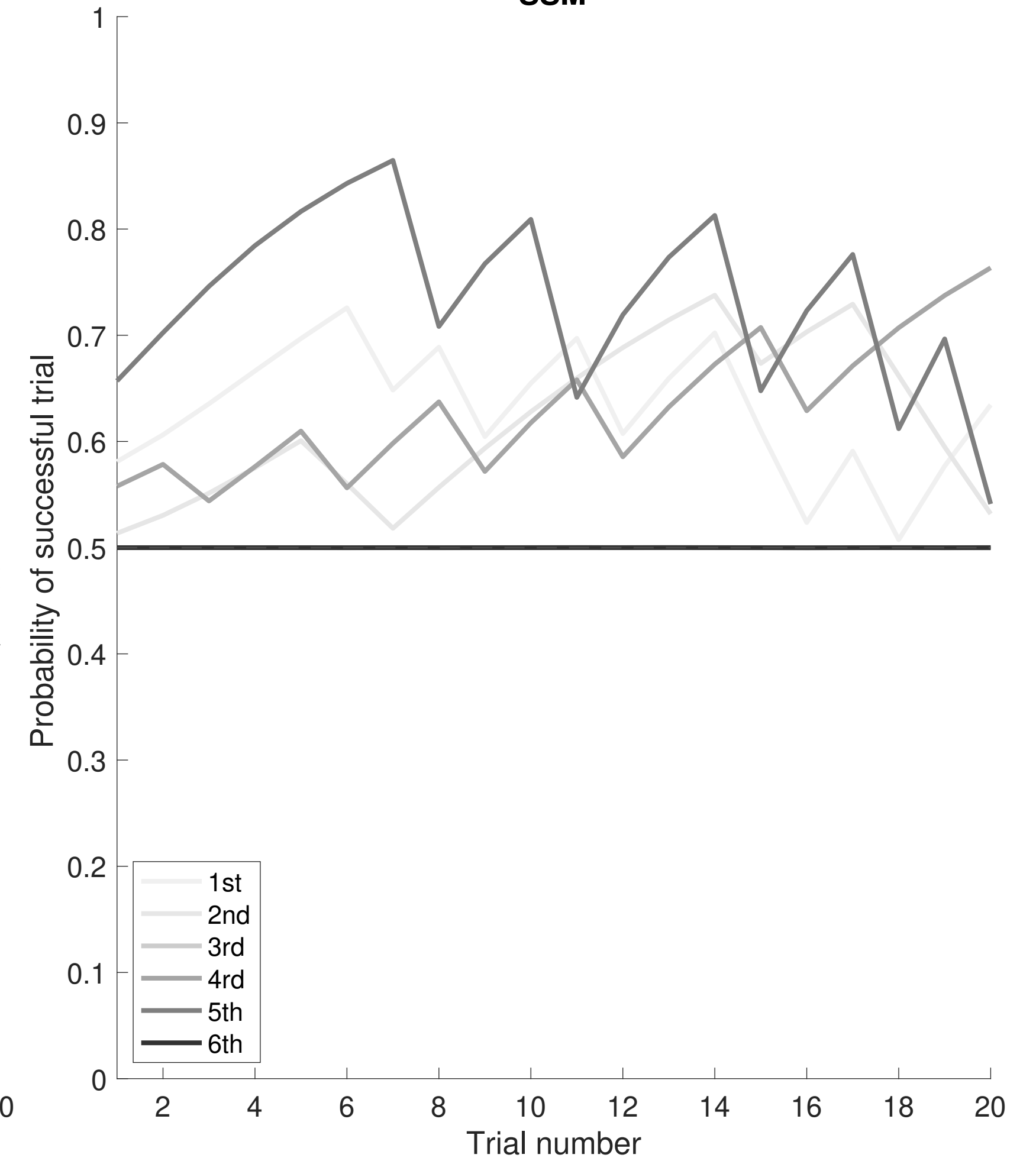
MRE-412 * Treatment: V600

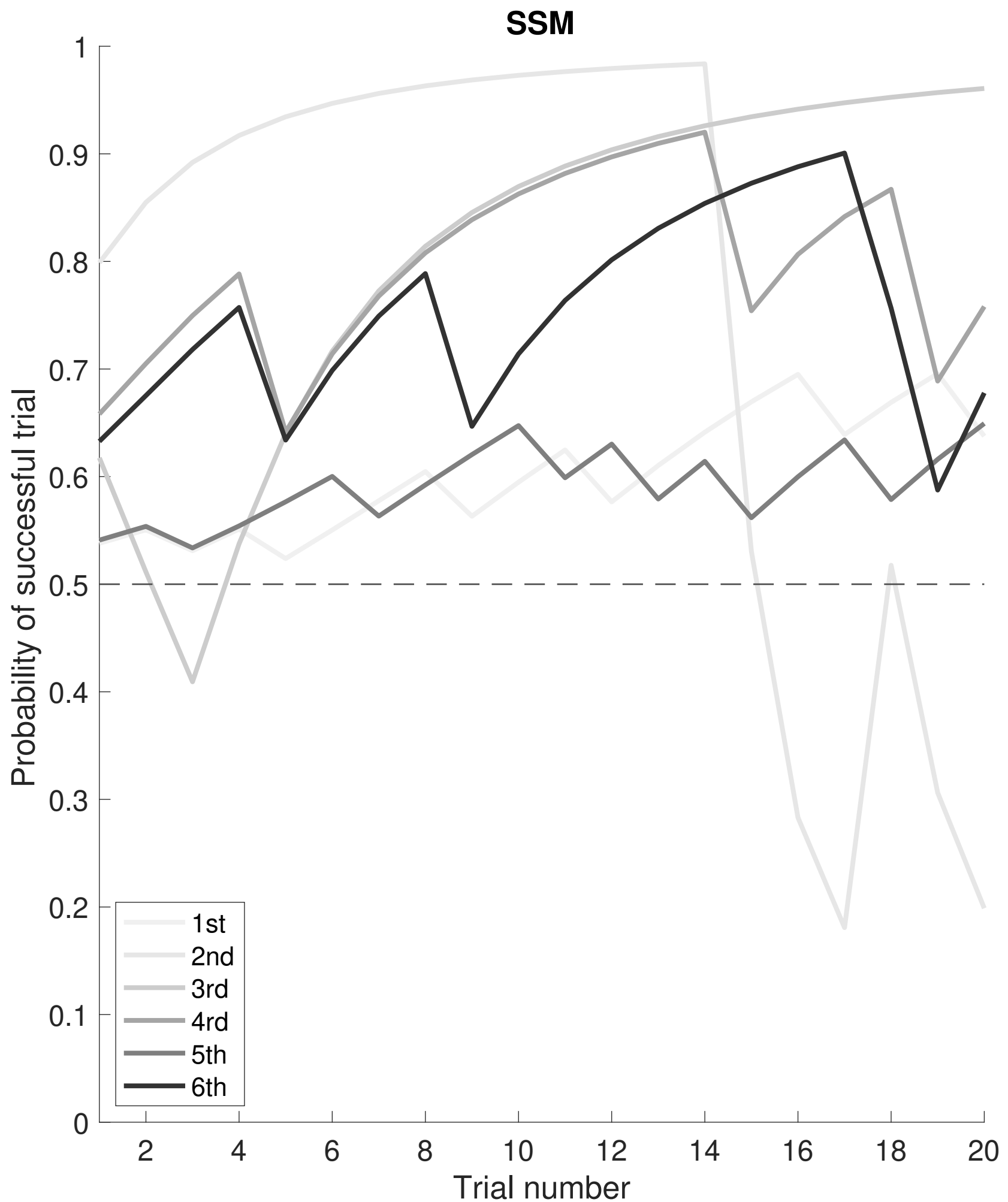
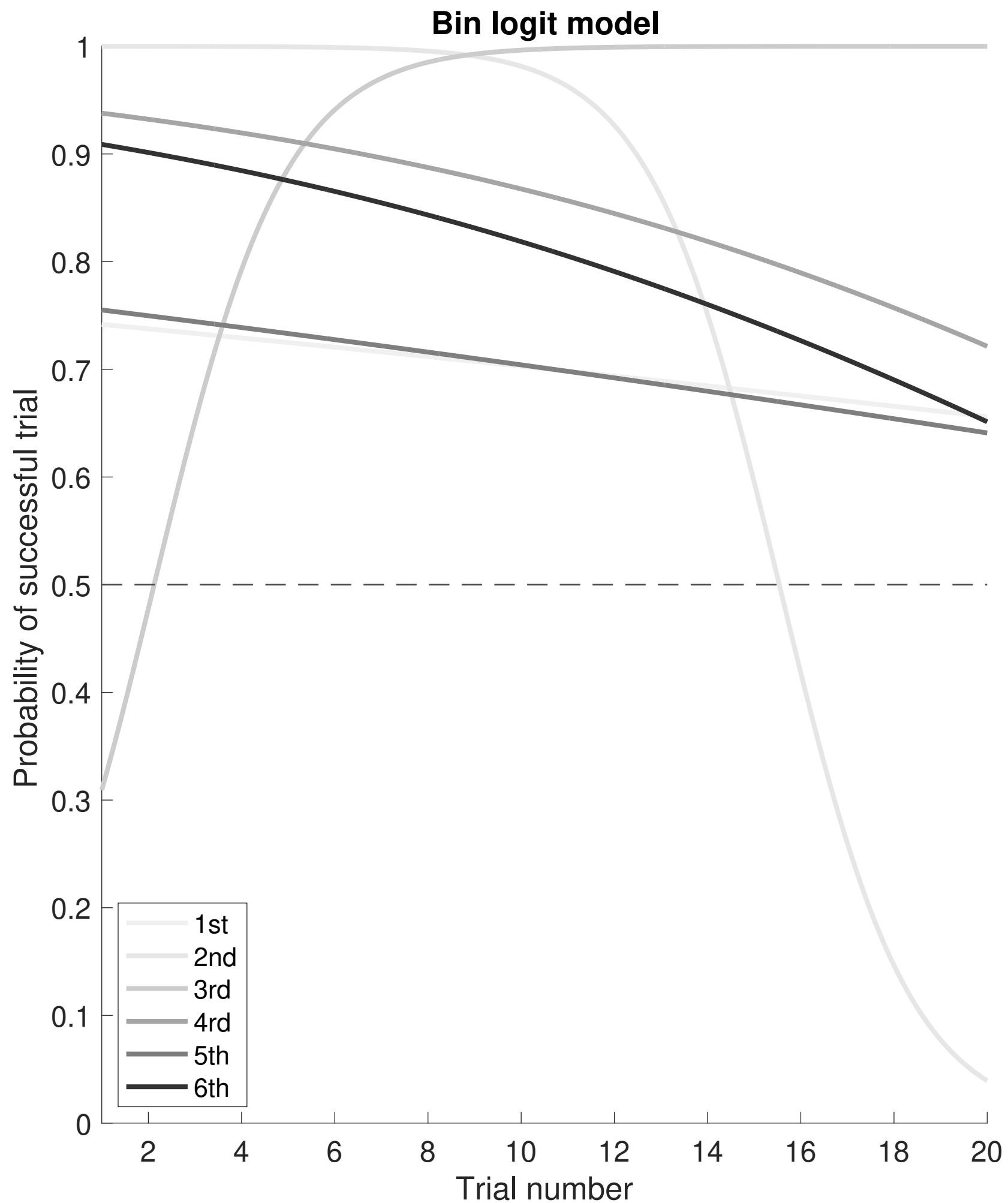
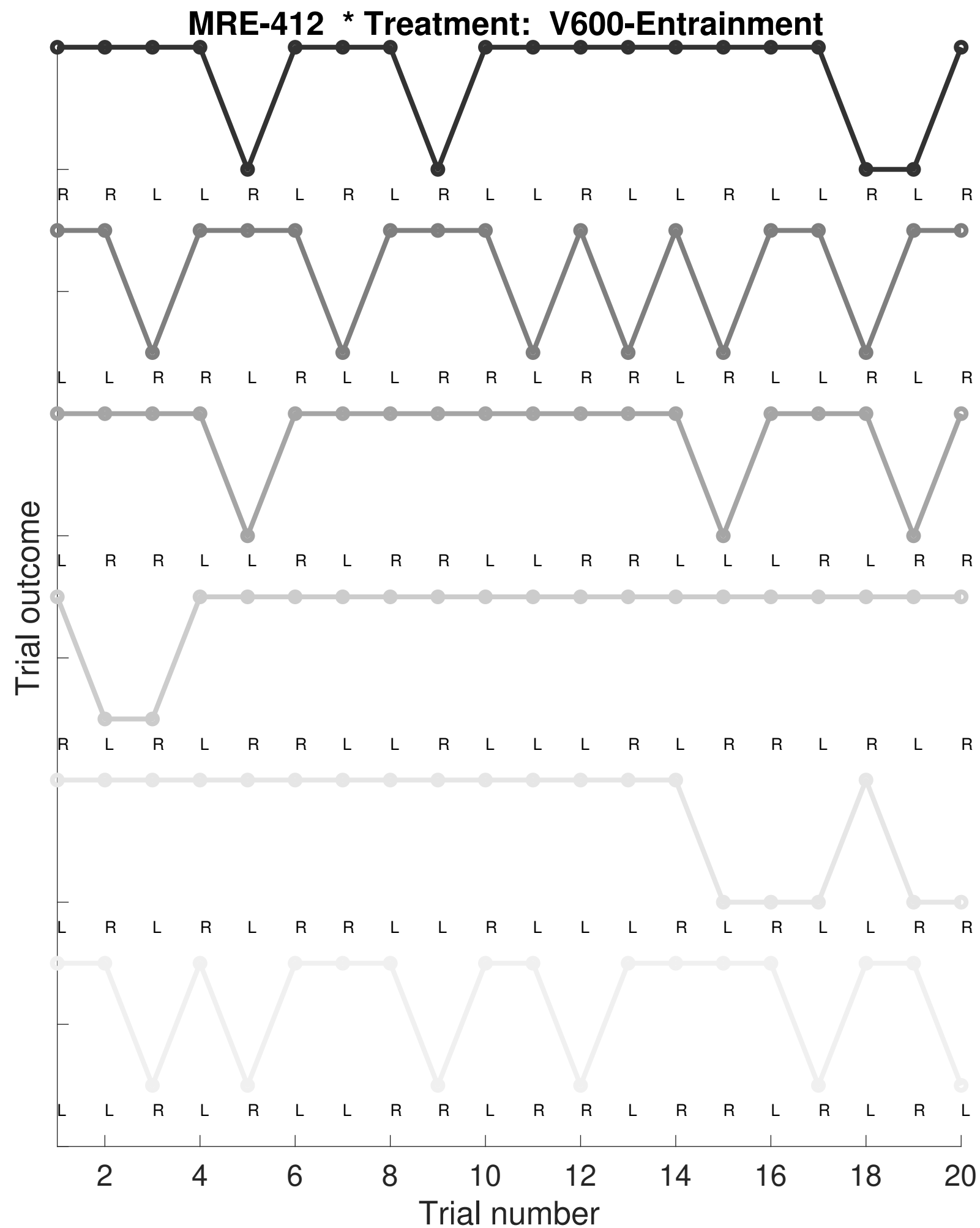


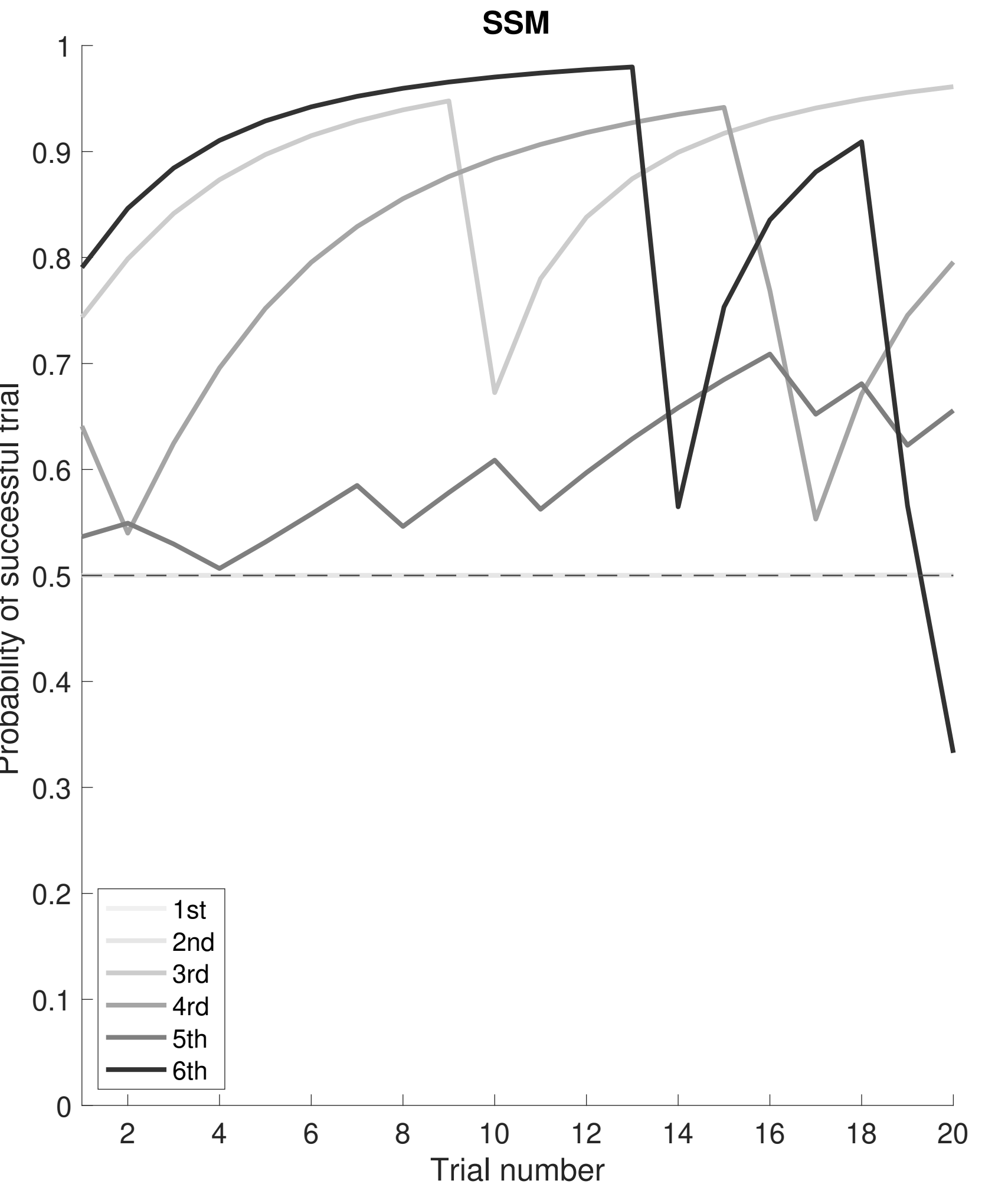
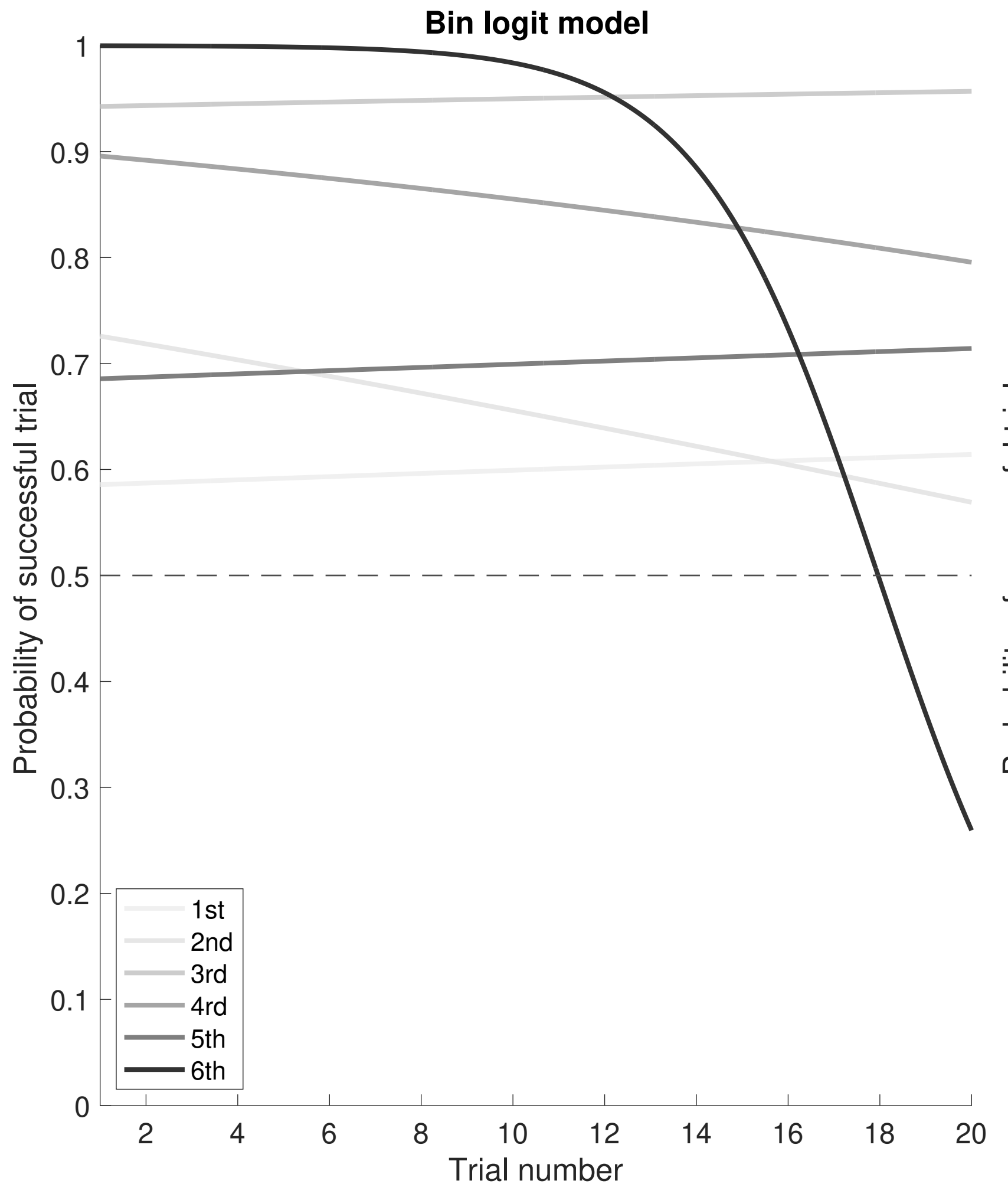
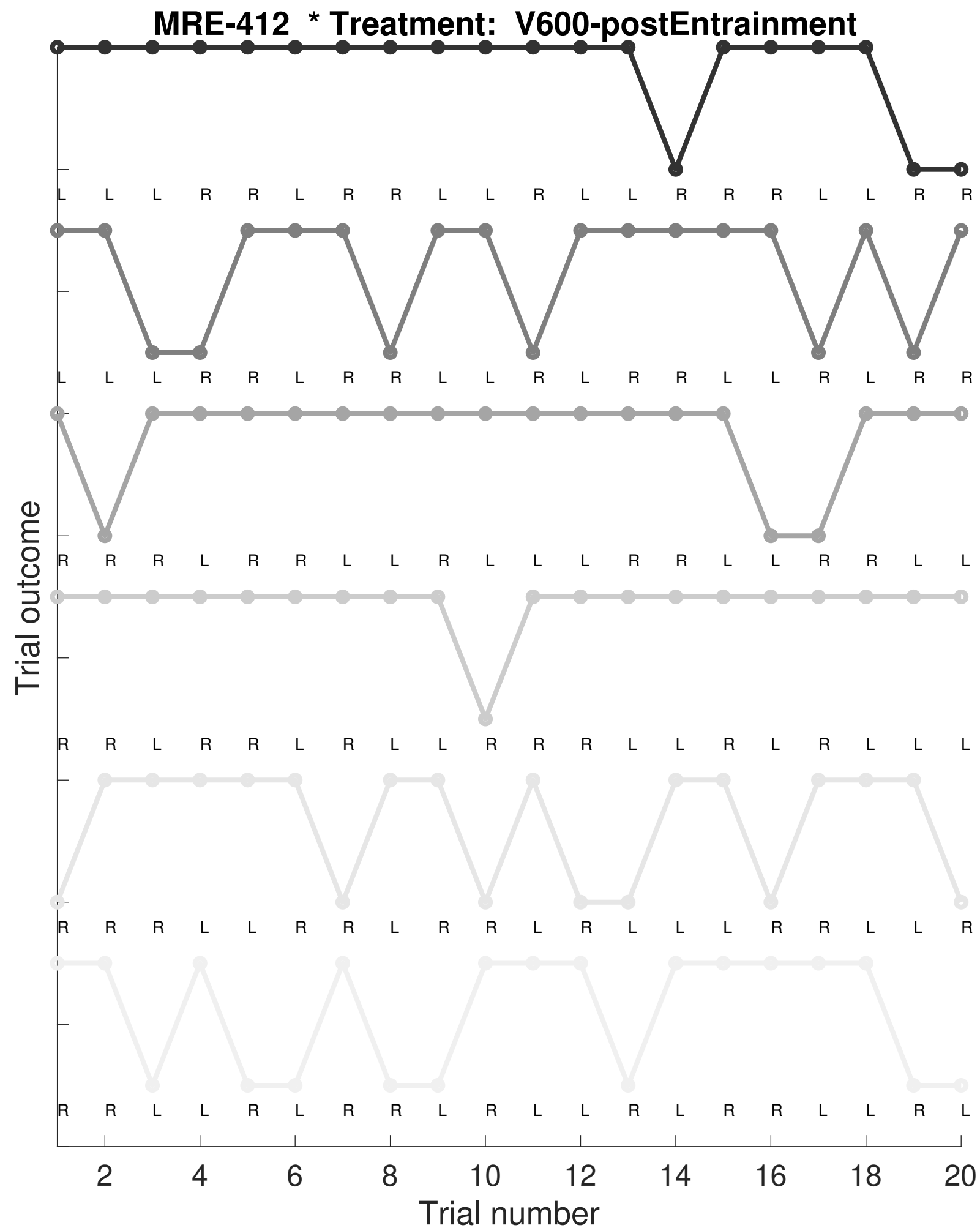
Bin logit model



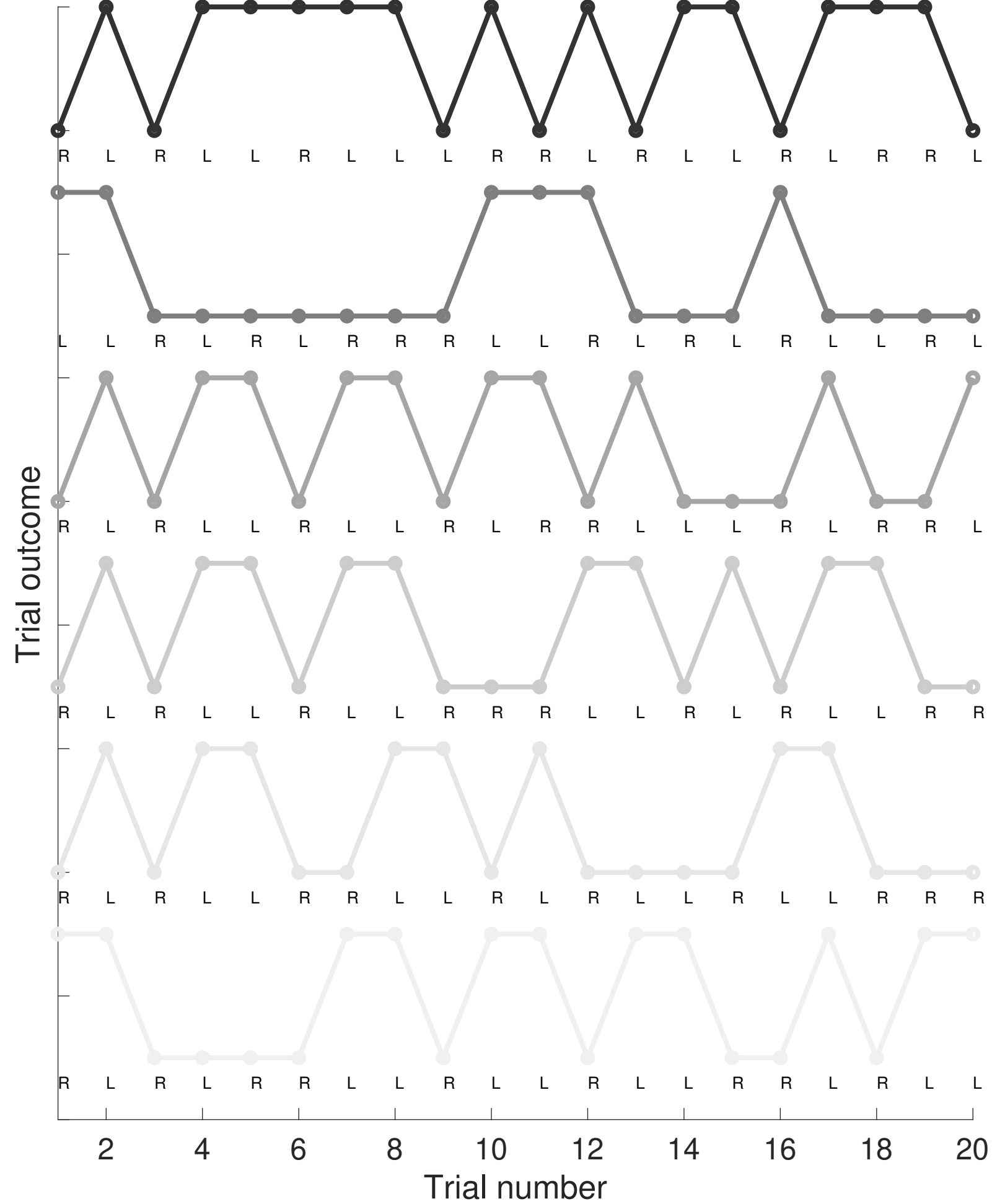
SSM



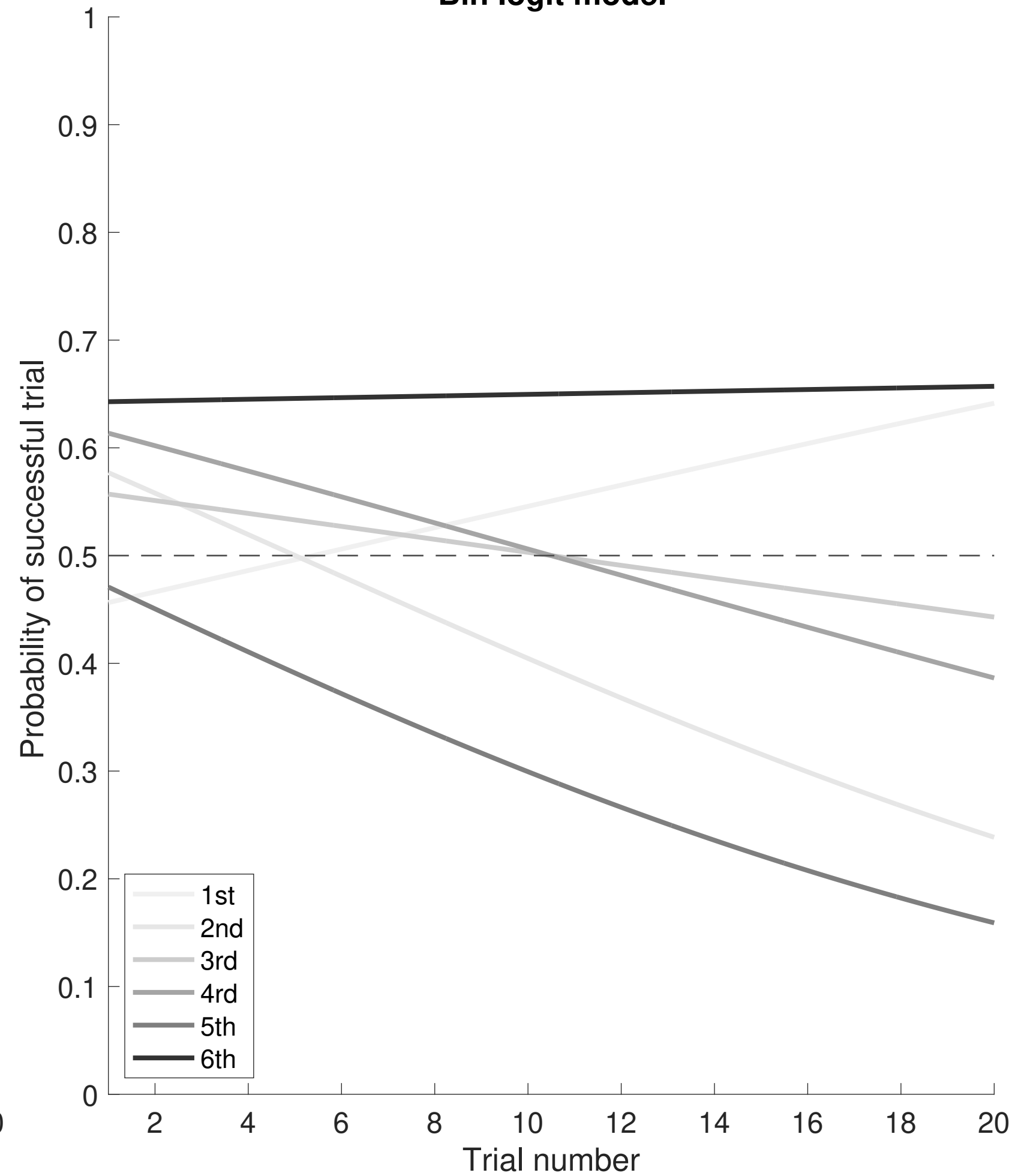




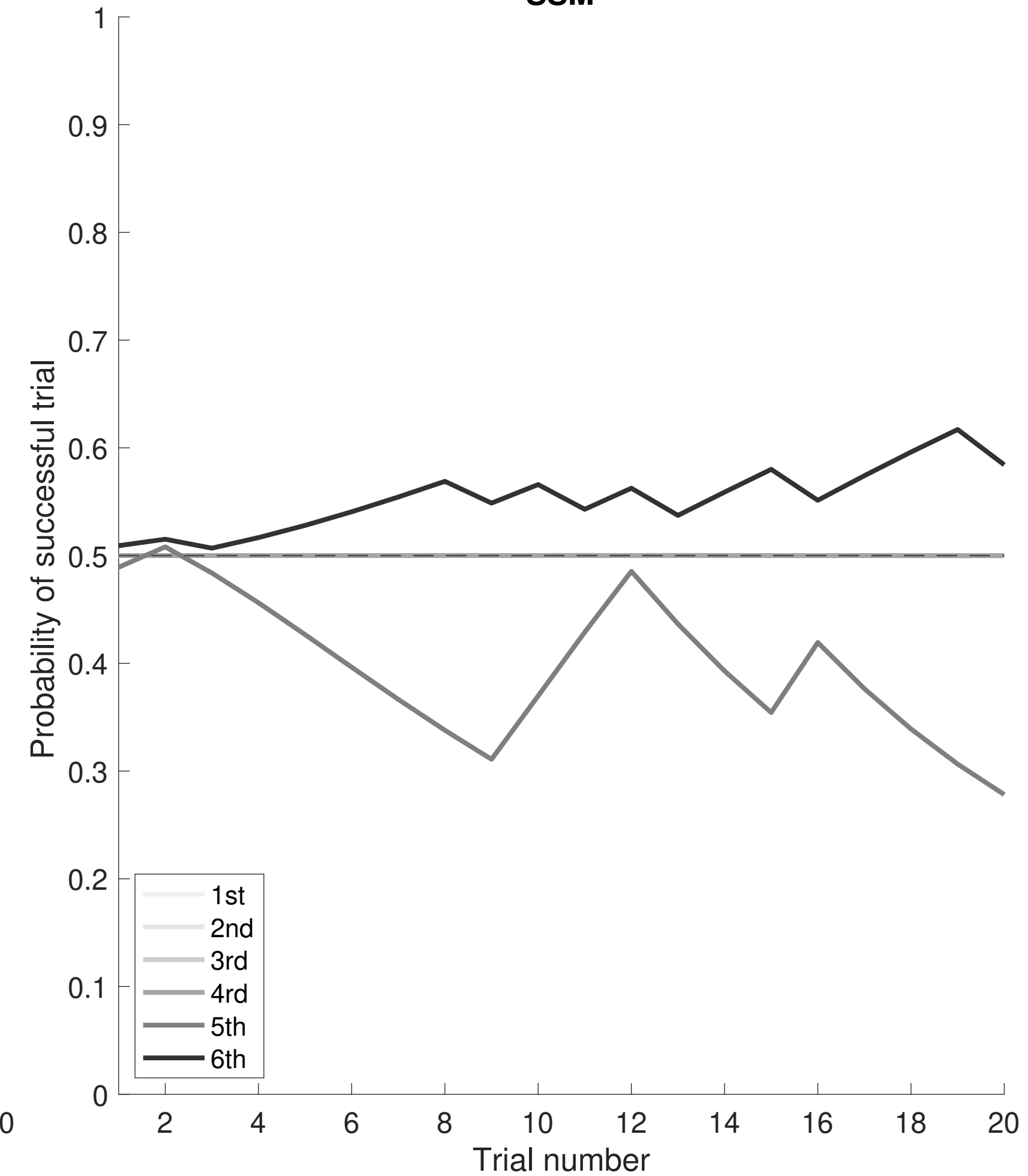
MRE-413 * Treatment: V600

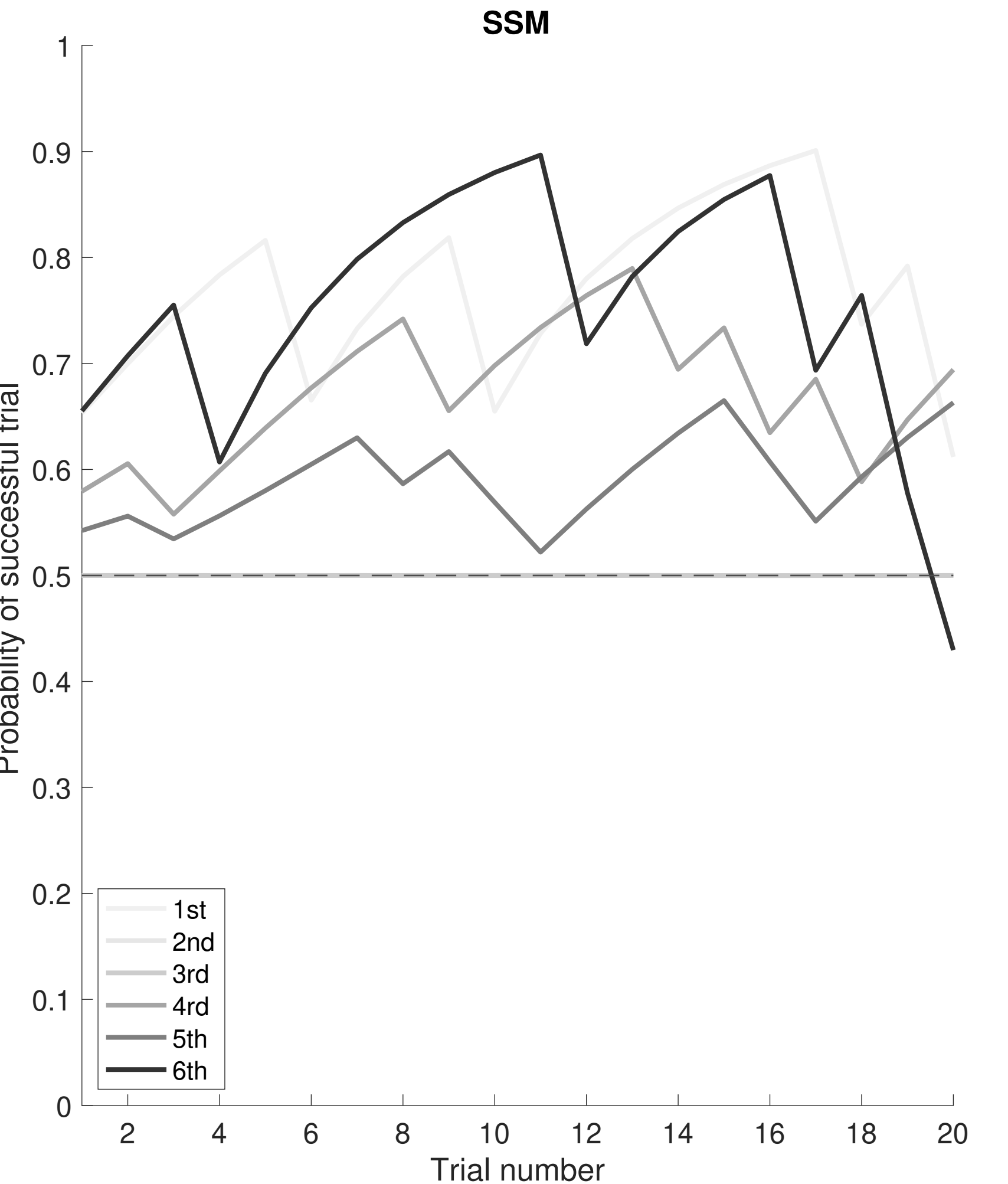
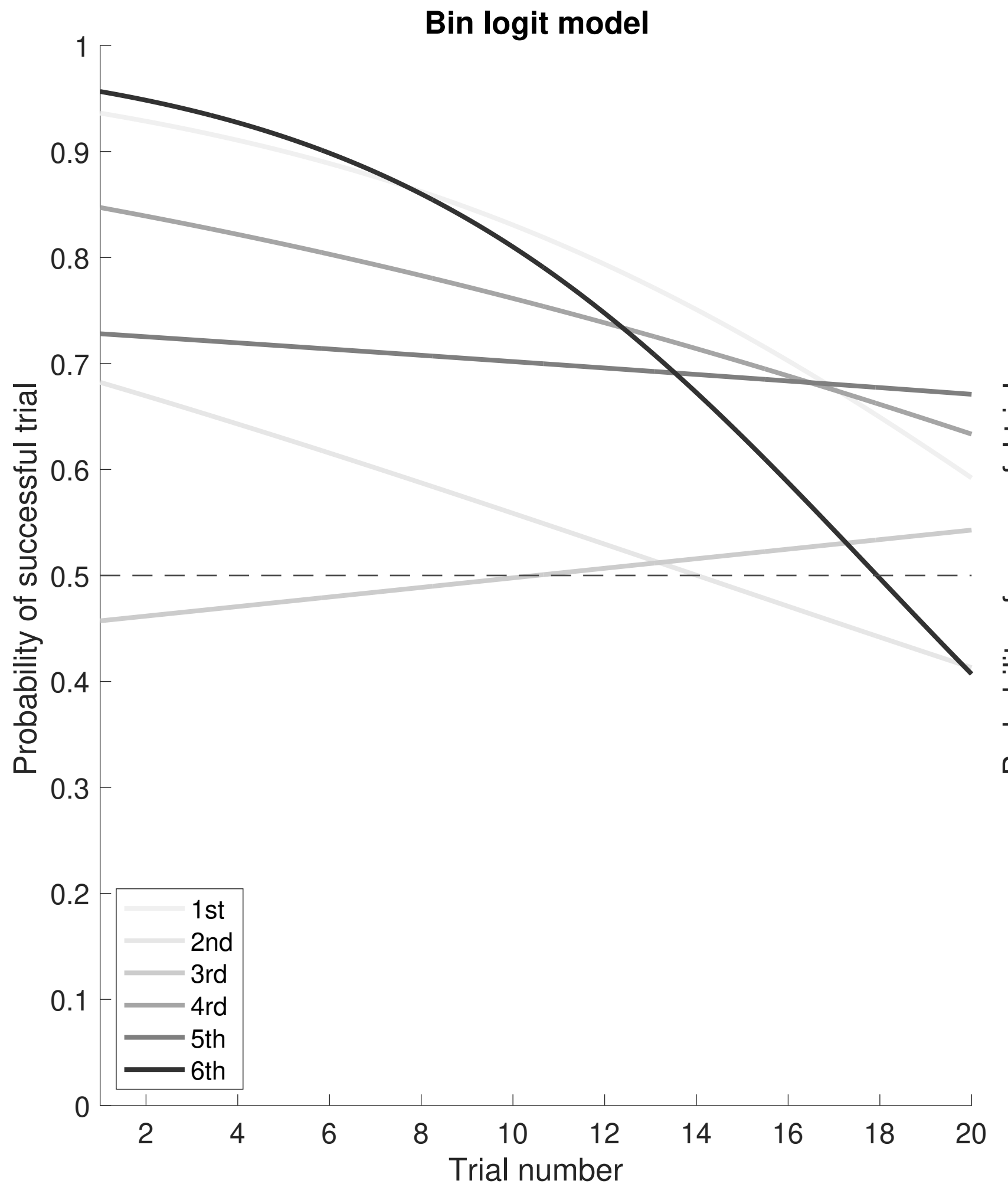
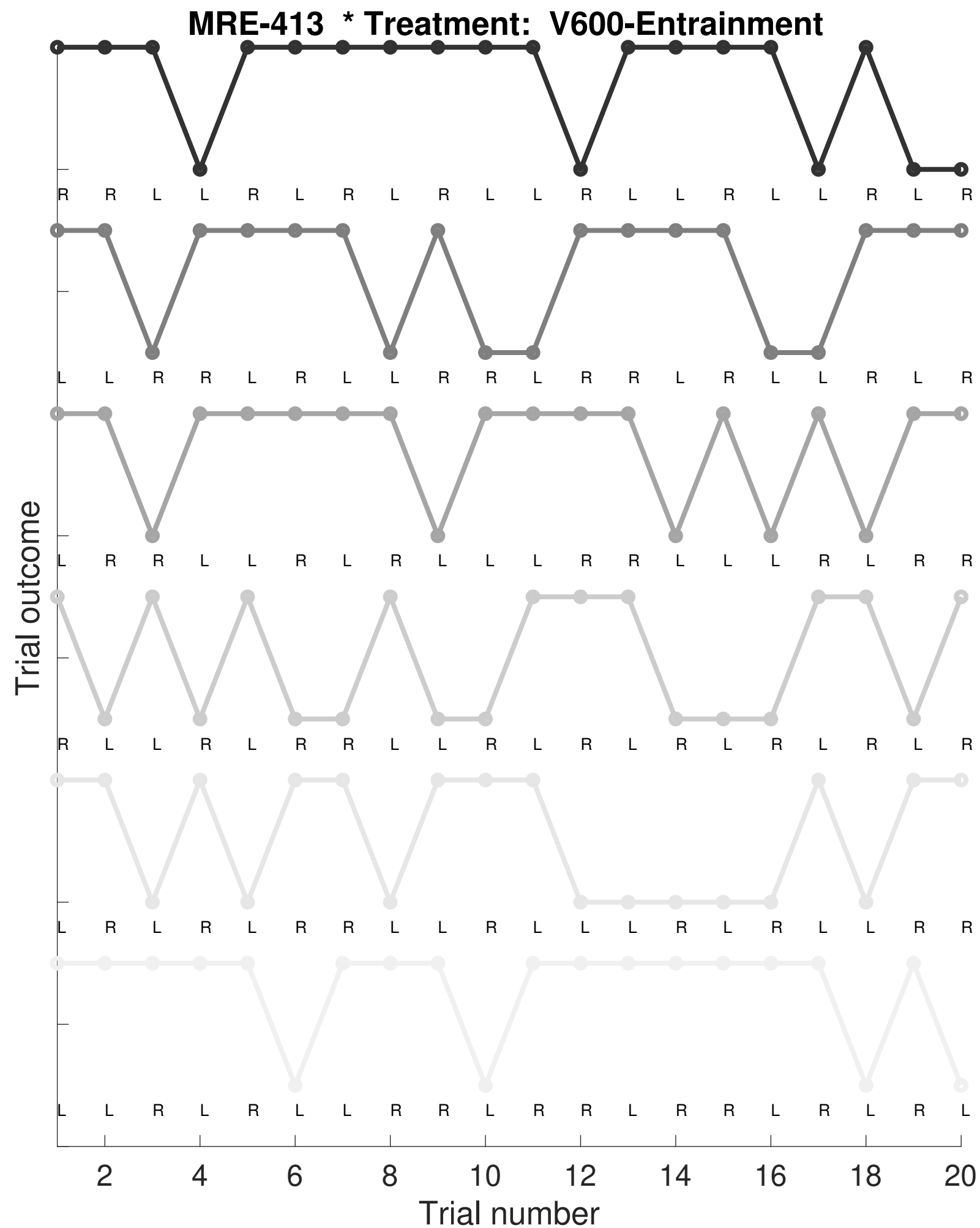


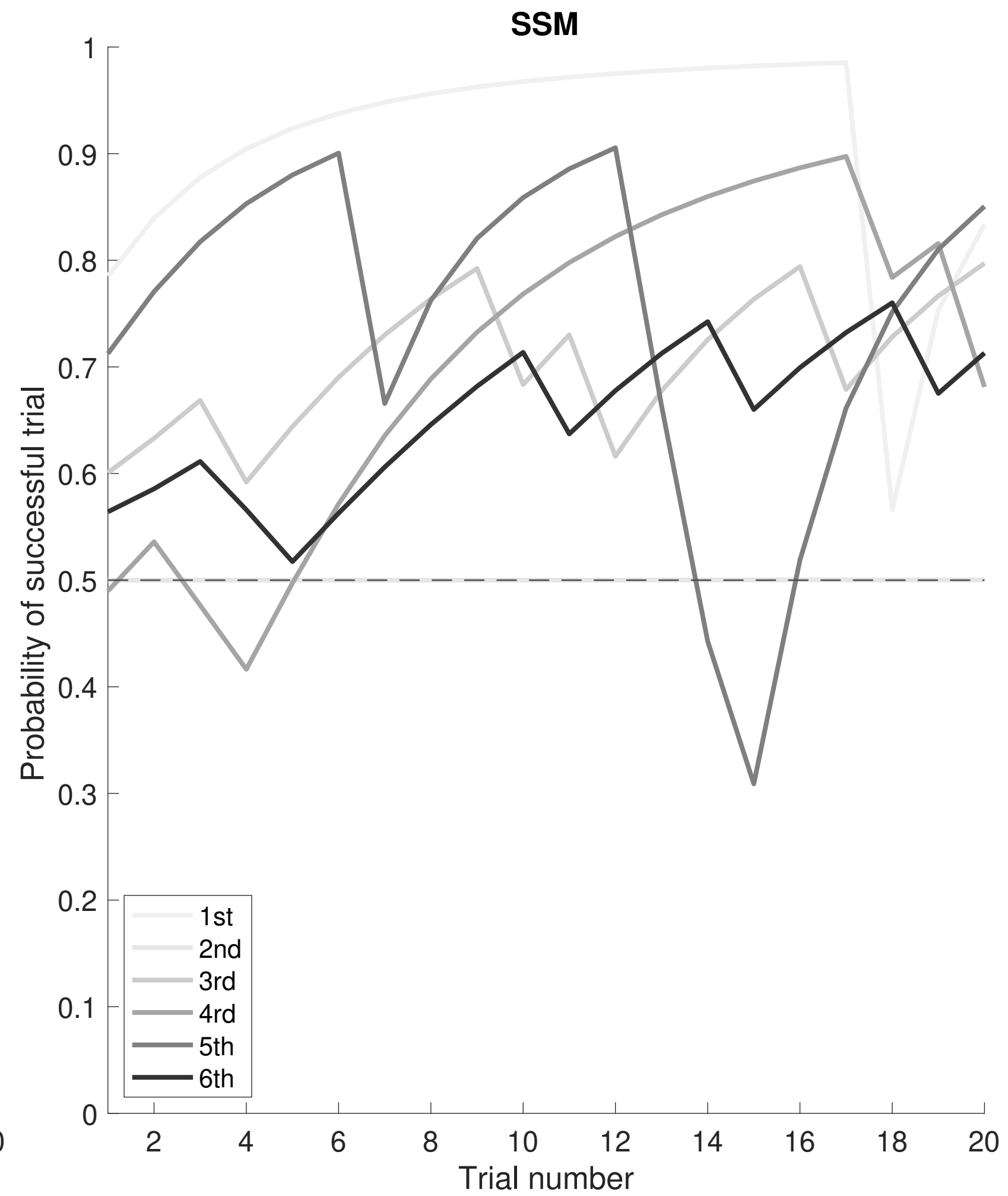
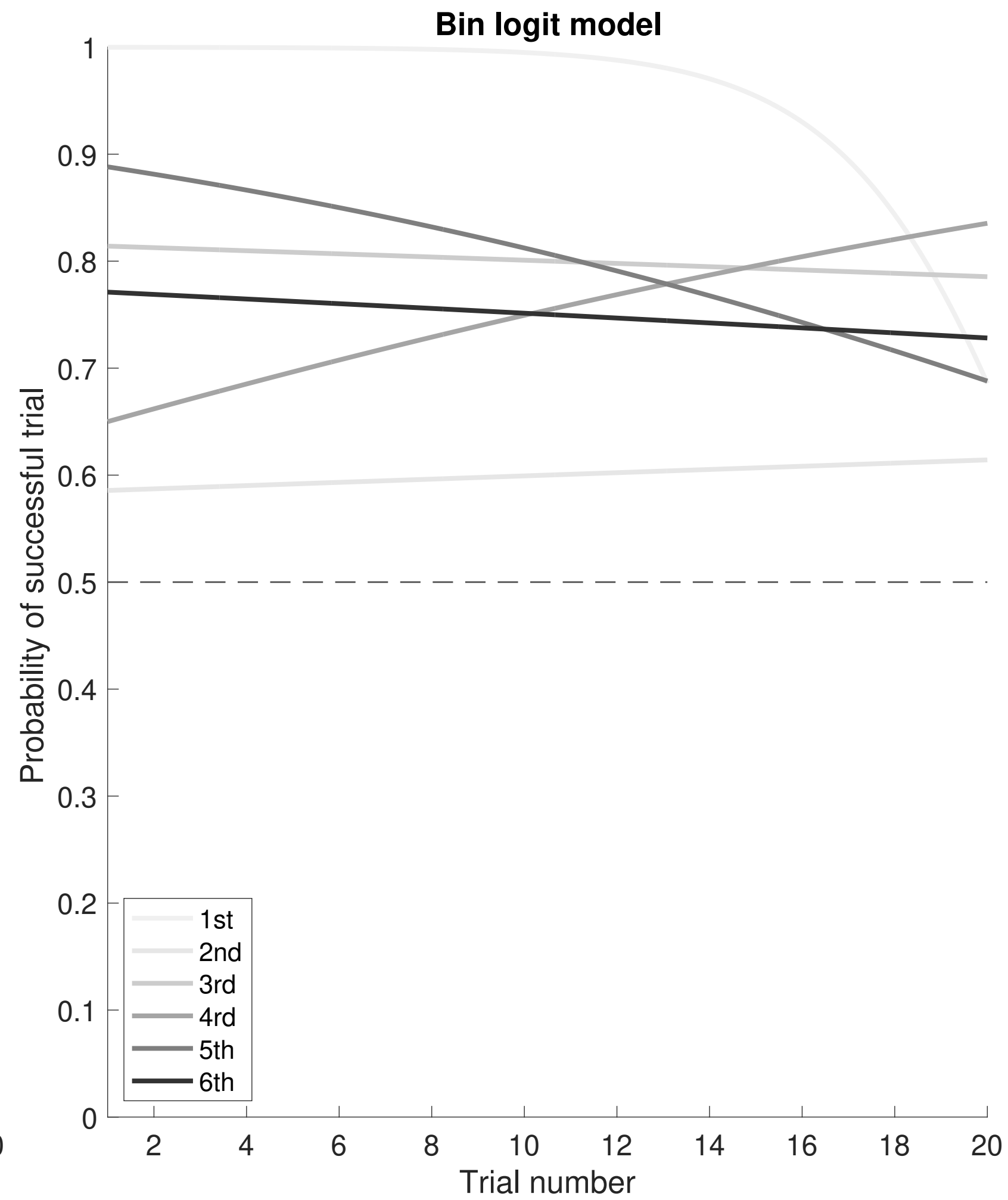
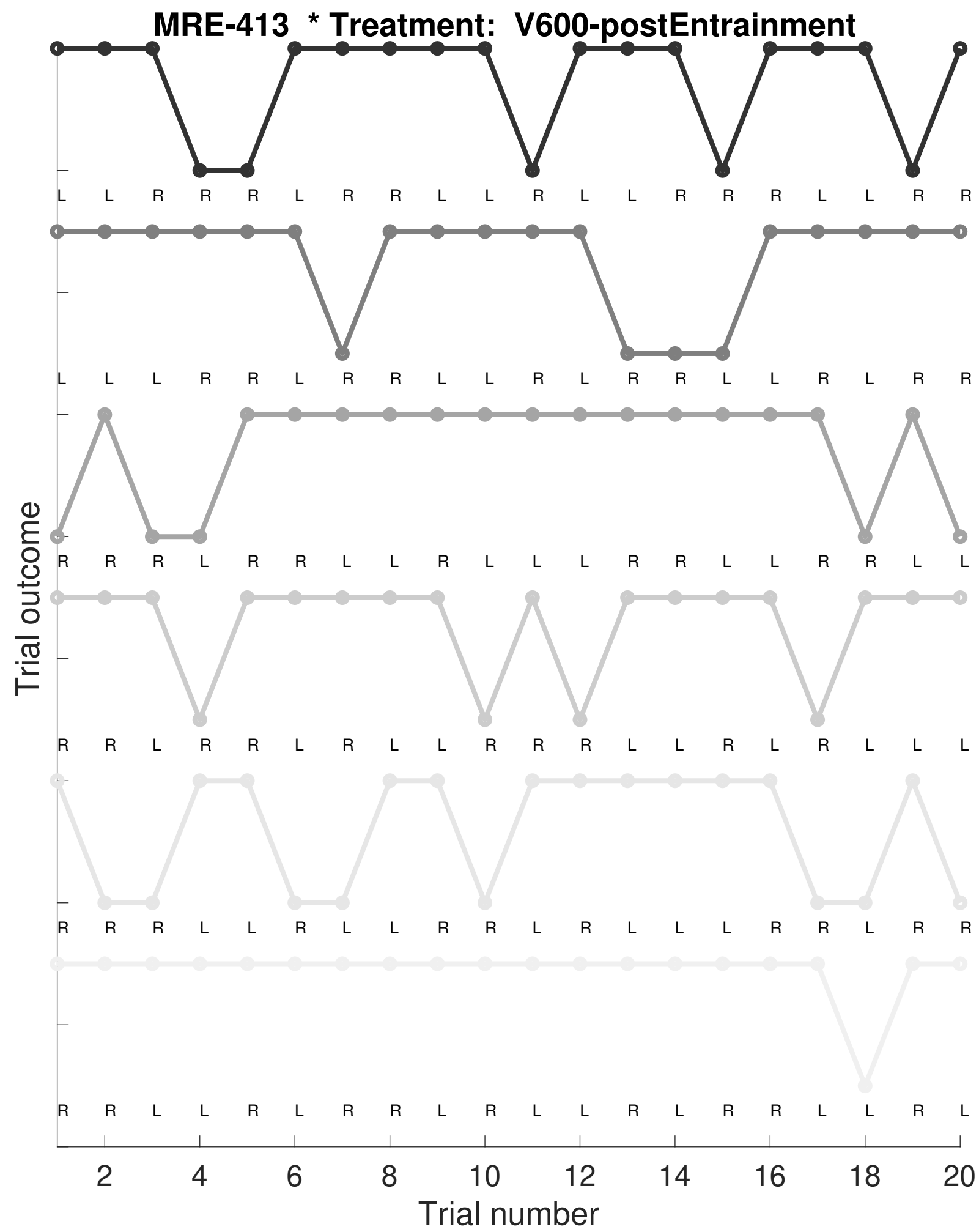
Bin logit model

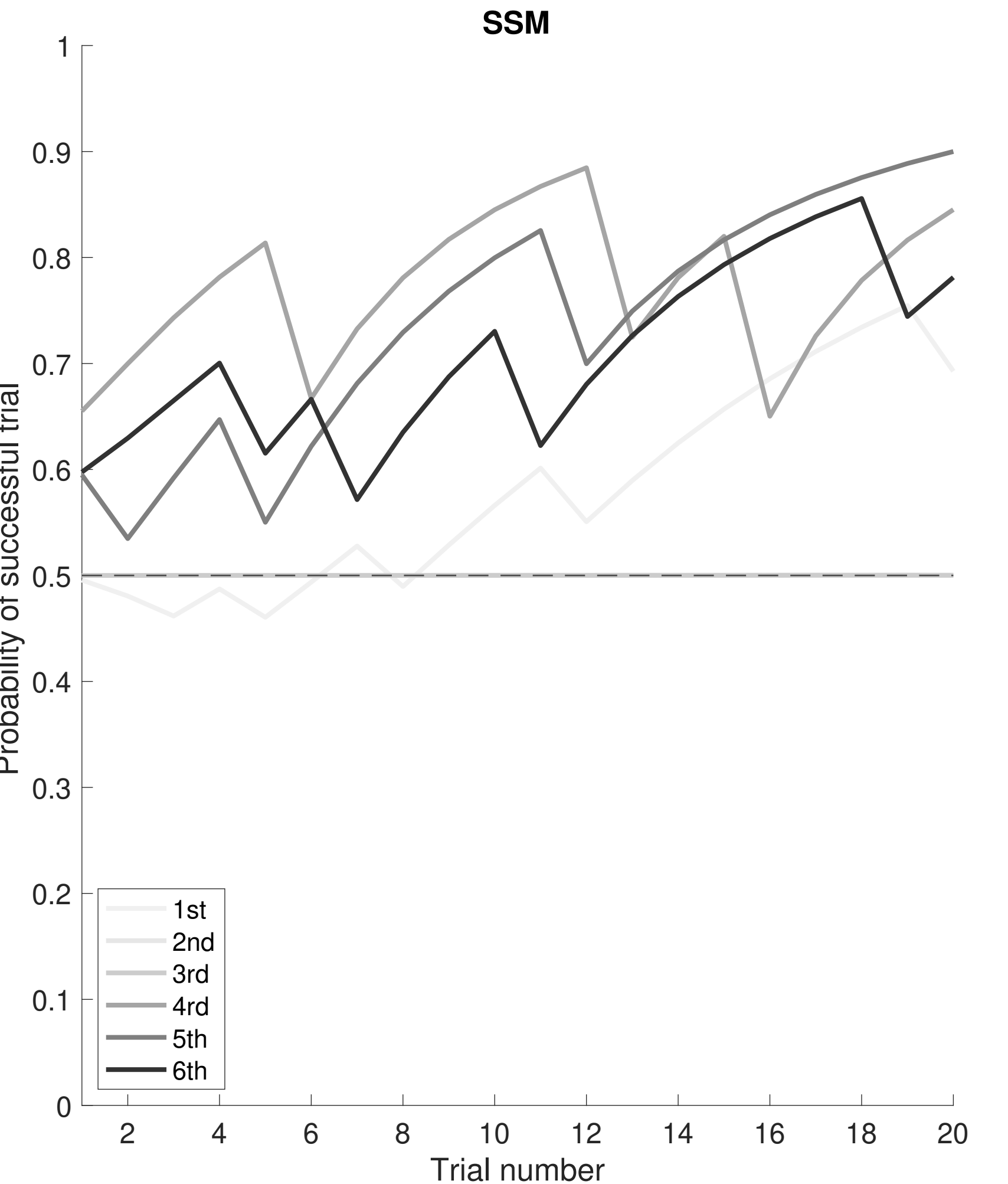
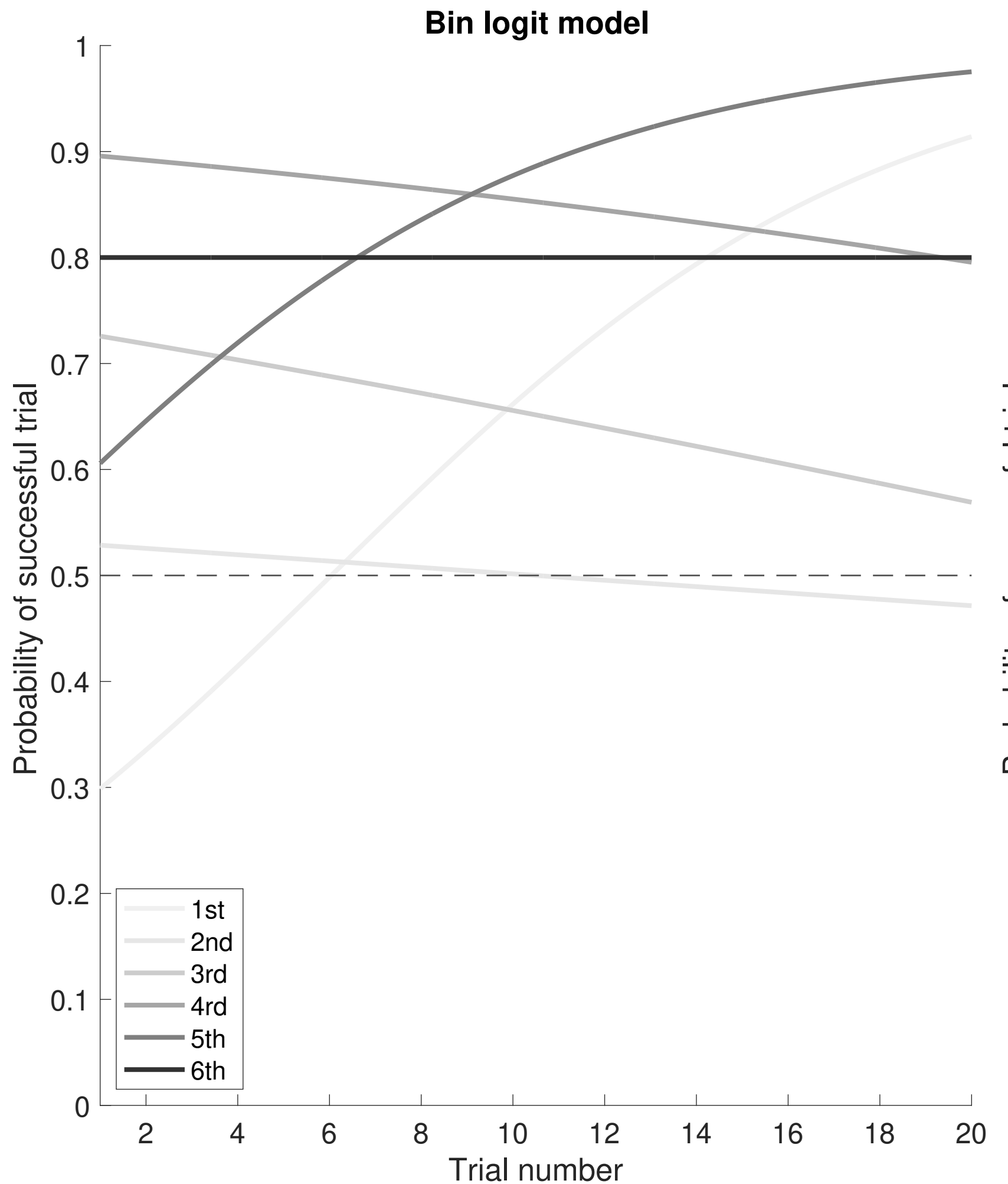
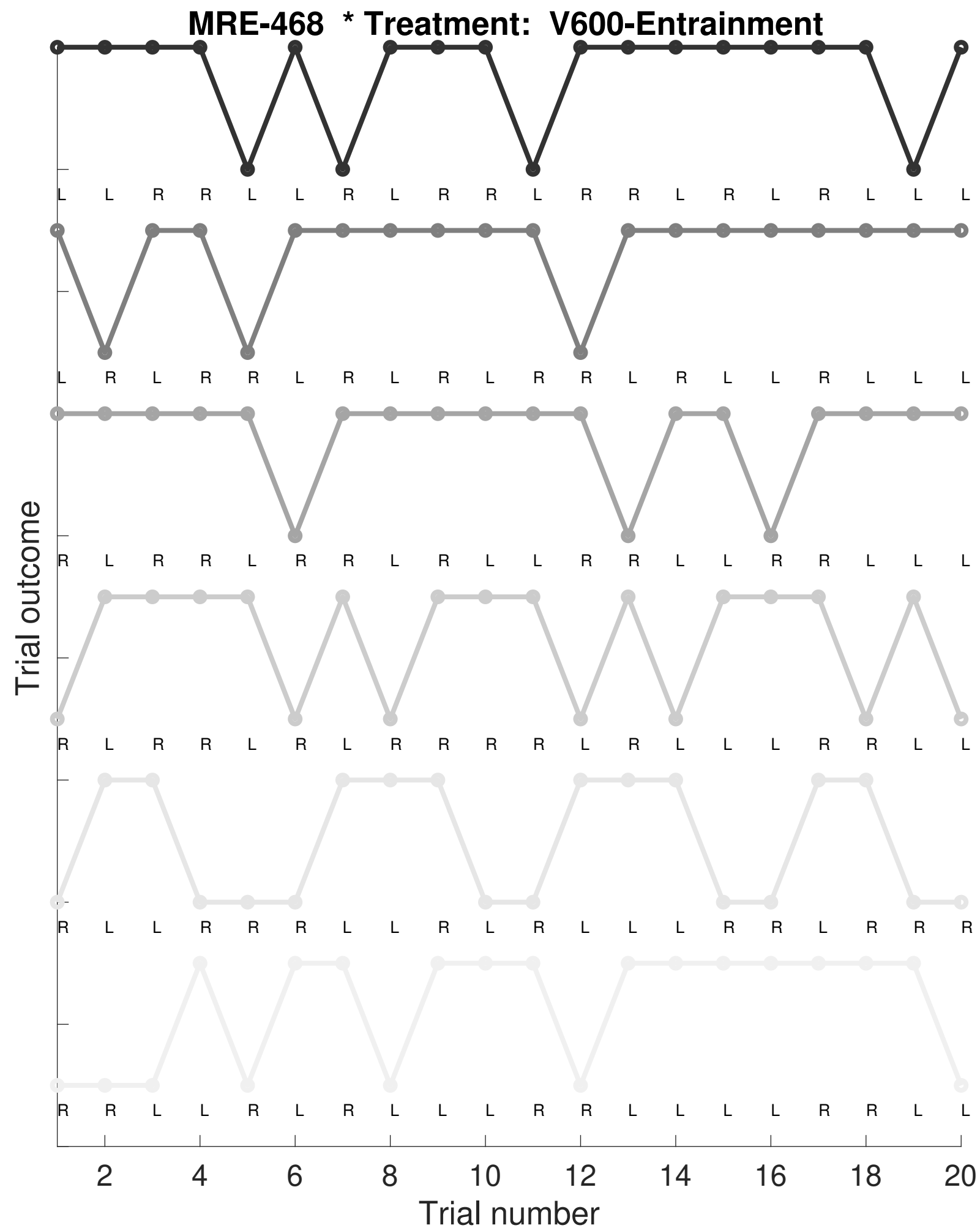


SSM









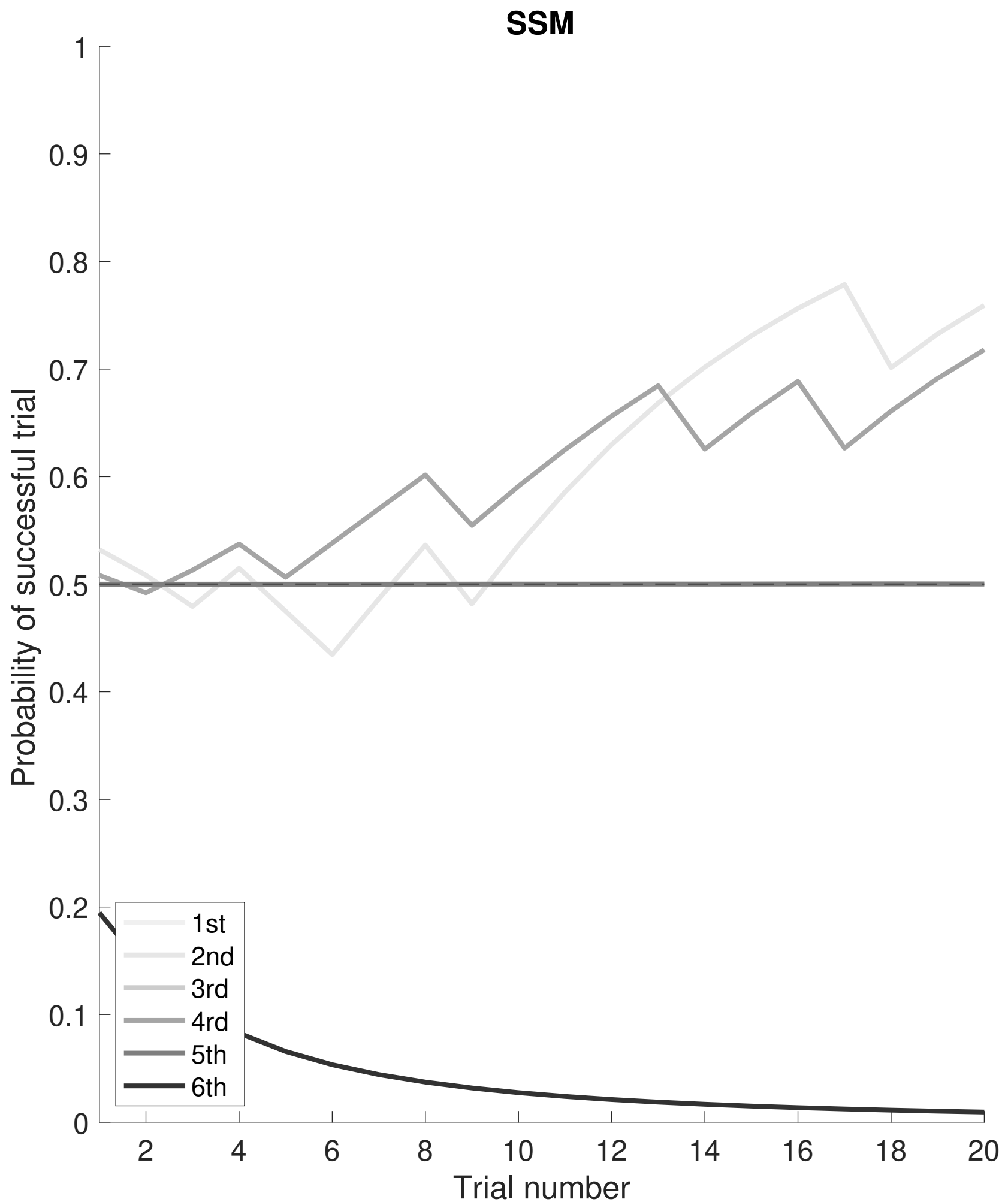
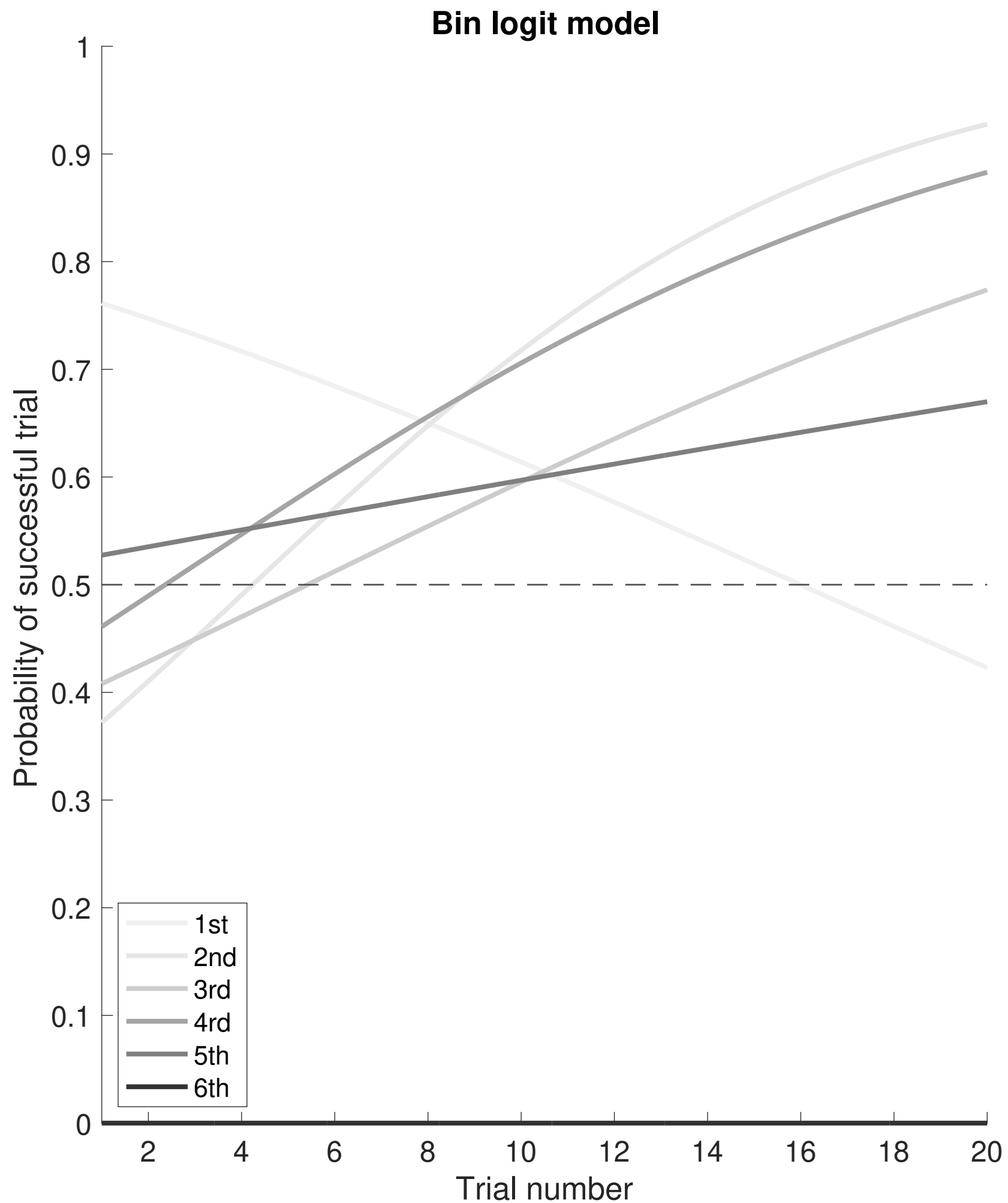
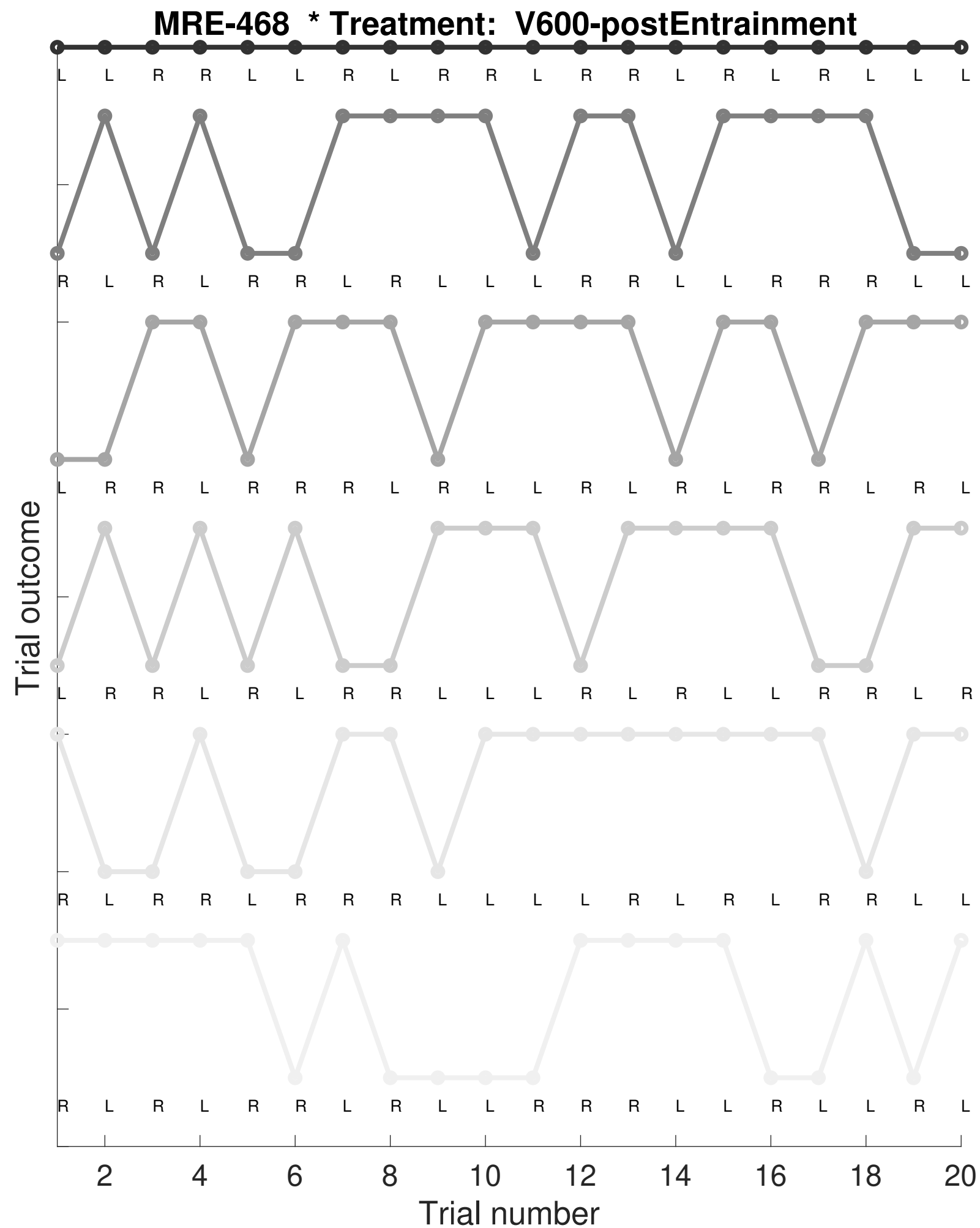
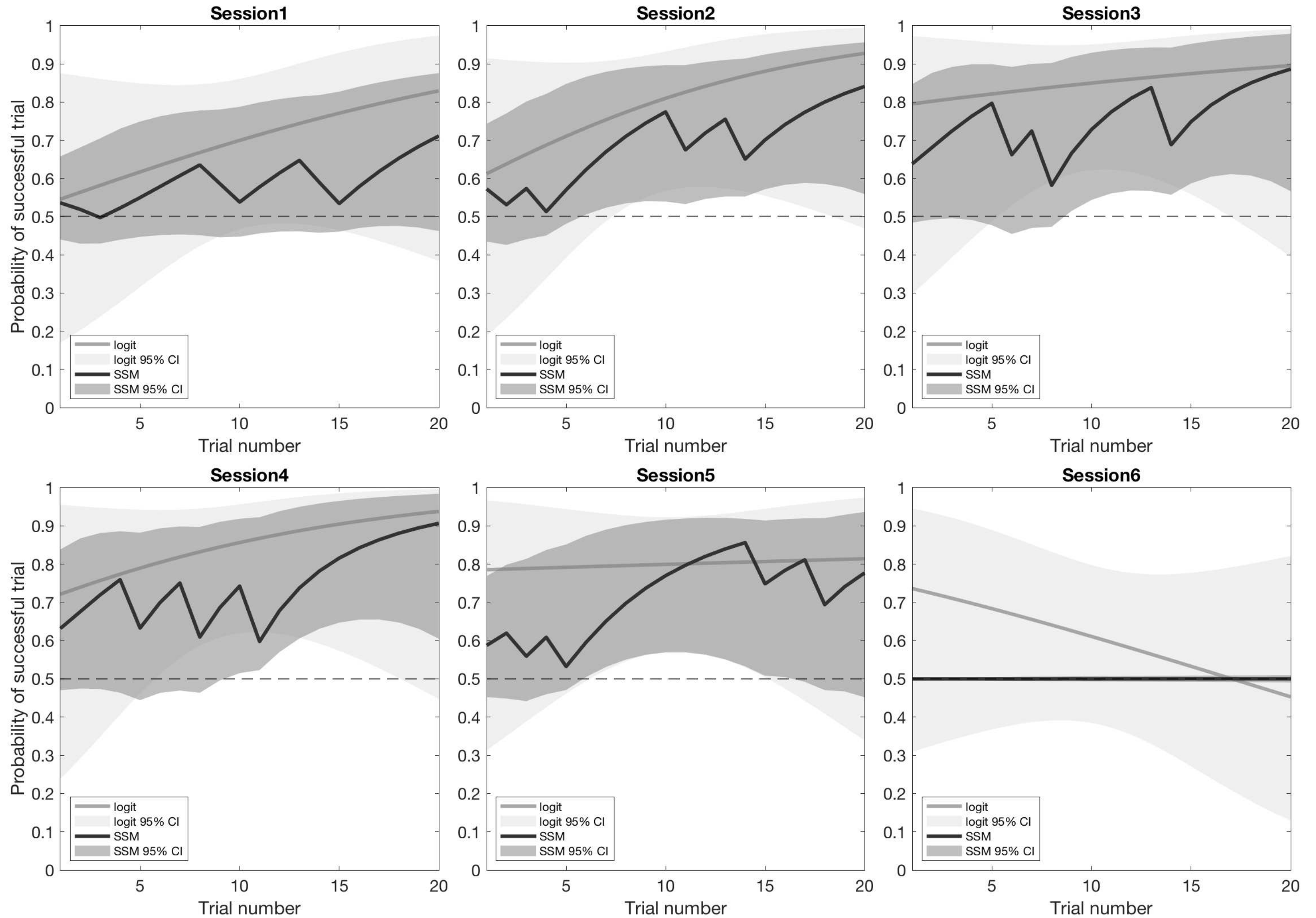


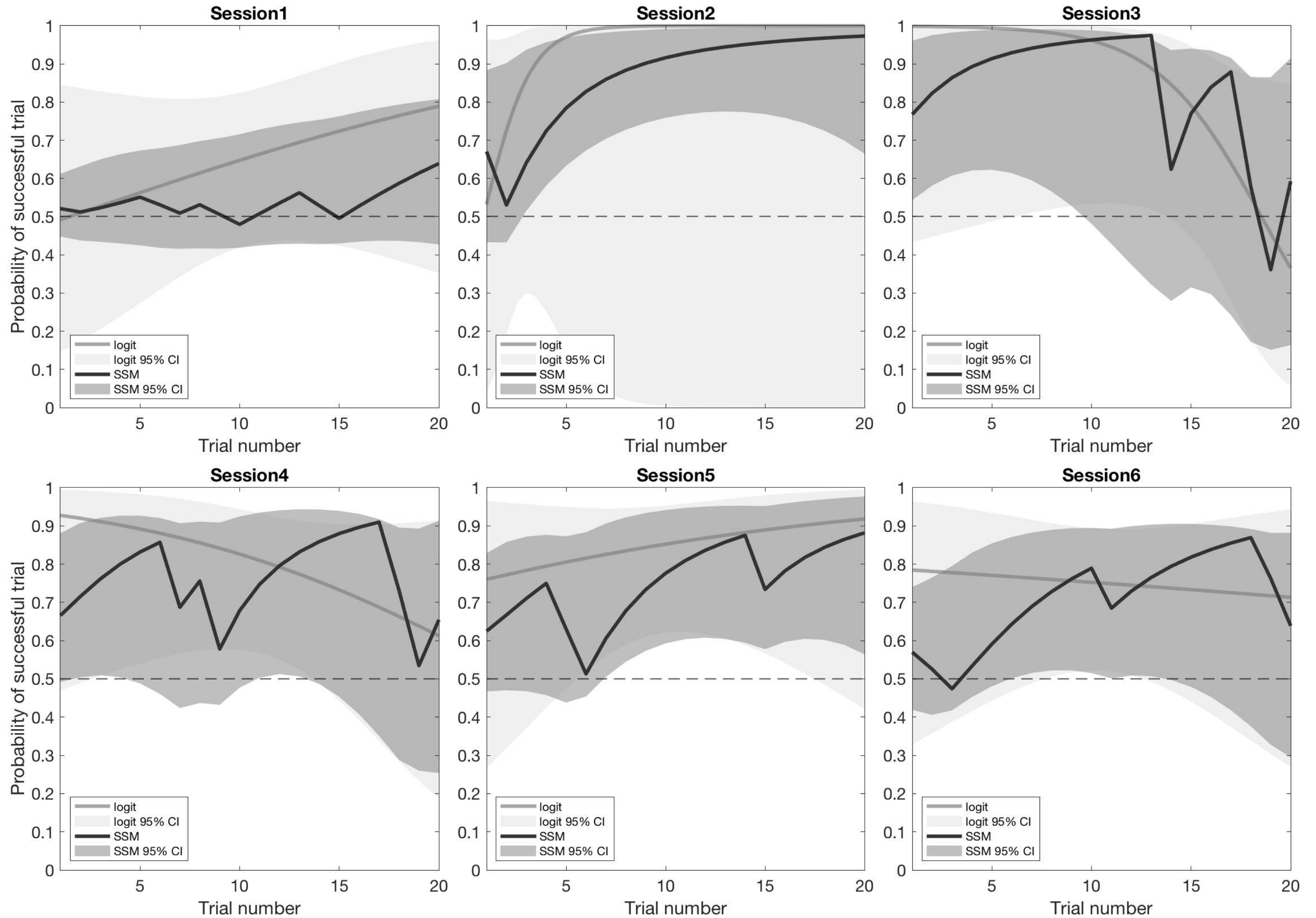
Figure S2

Logit and SSM estimates with 95% CI bars for each individual animal in each experimental group.

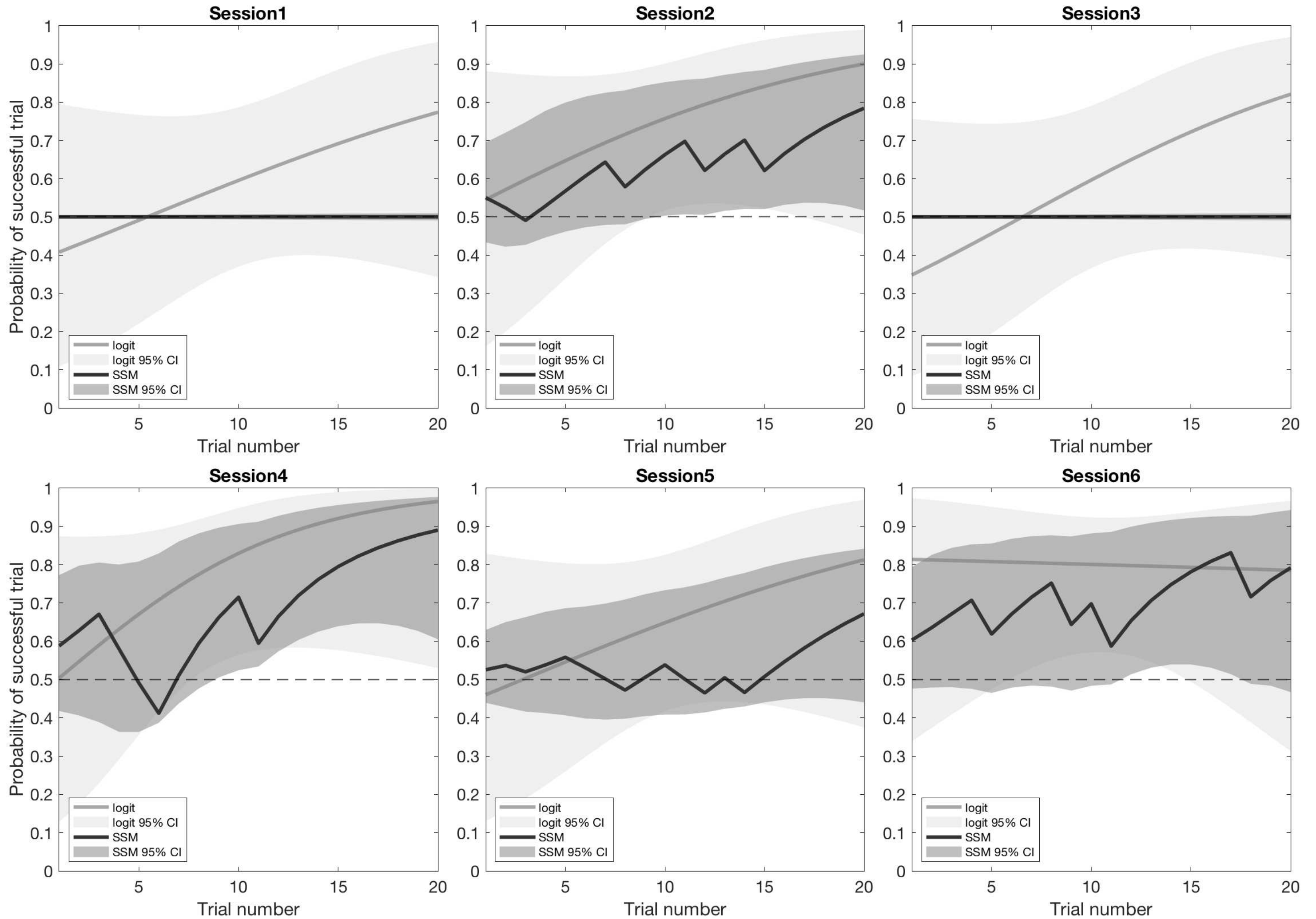
MRE-313 (CTL)



MRE-315 (CTL)

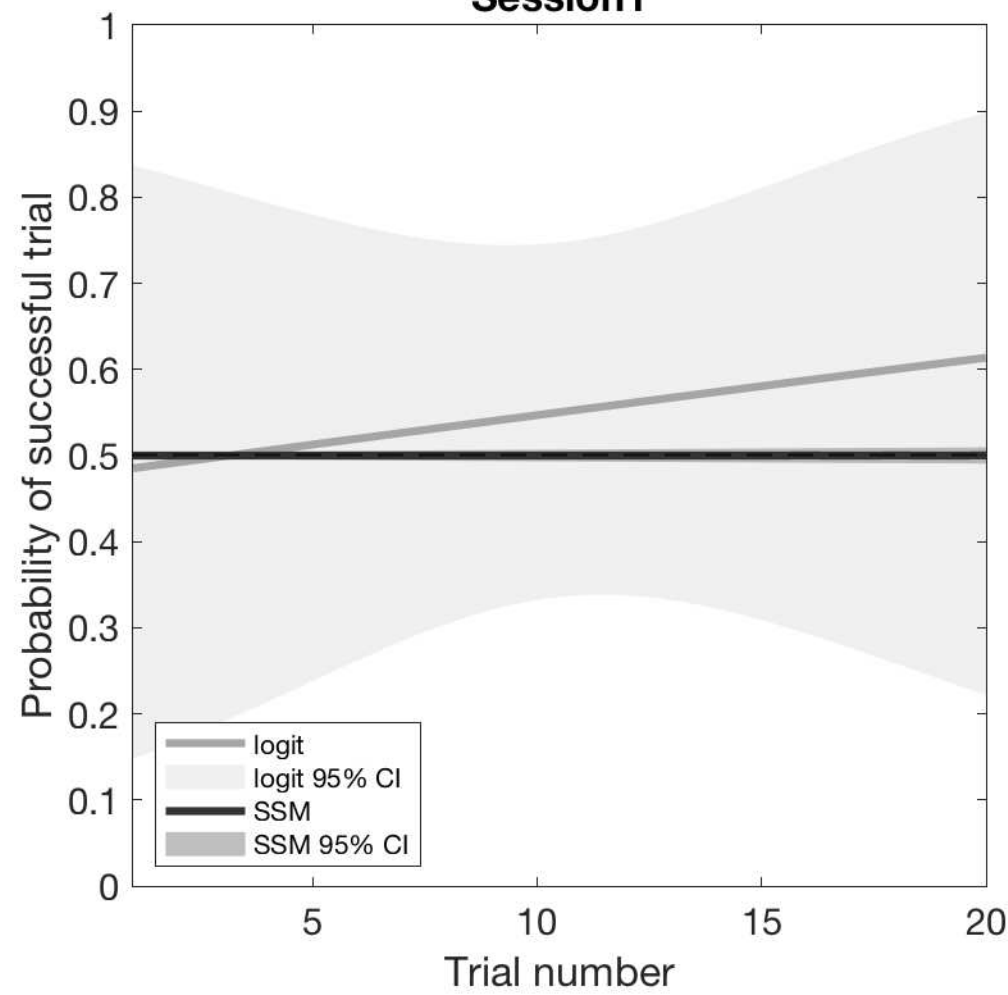


MRE-325 (CTL)

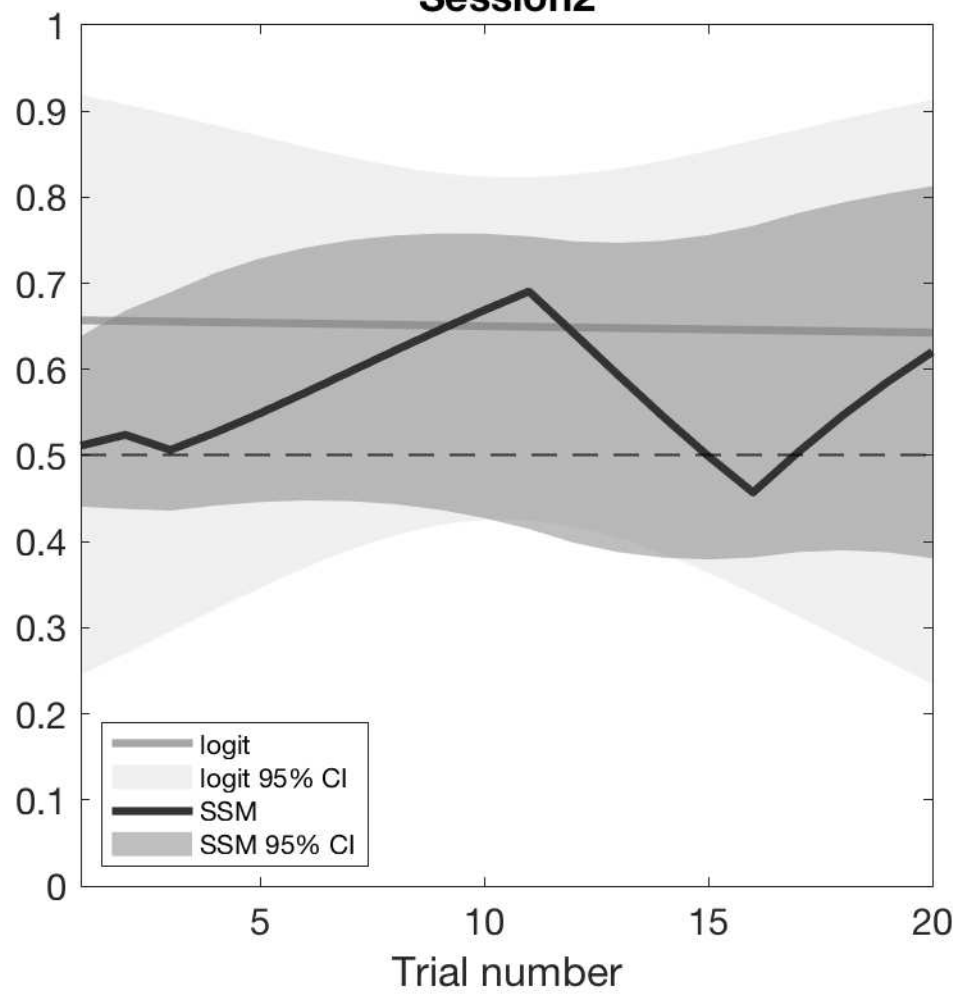


MRE-326 (CTL)

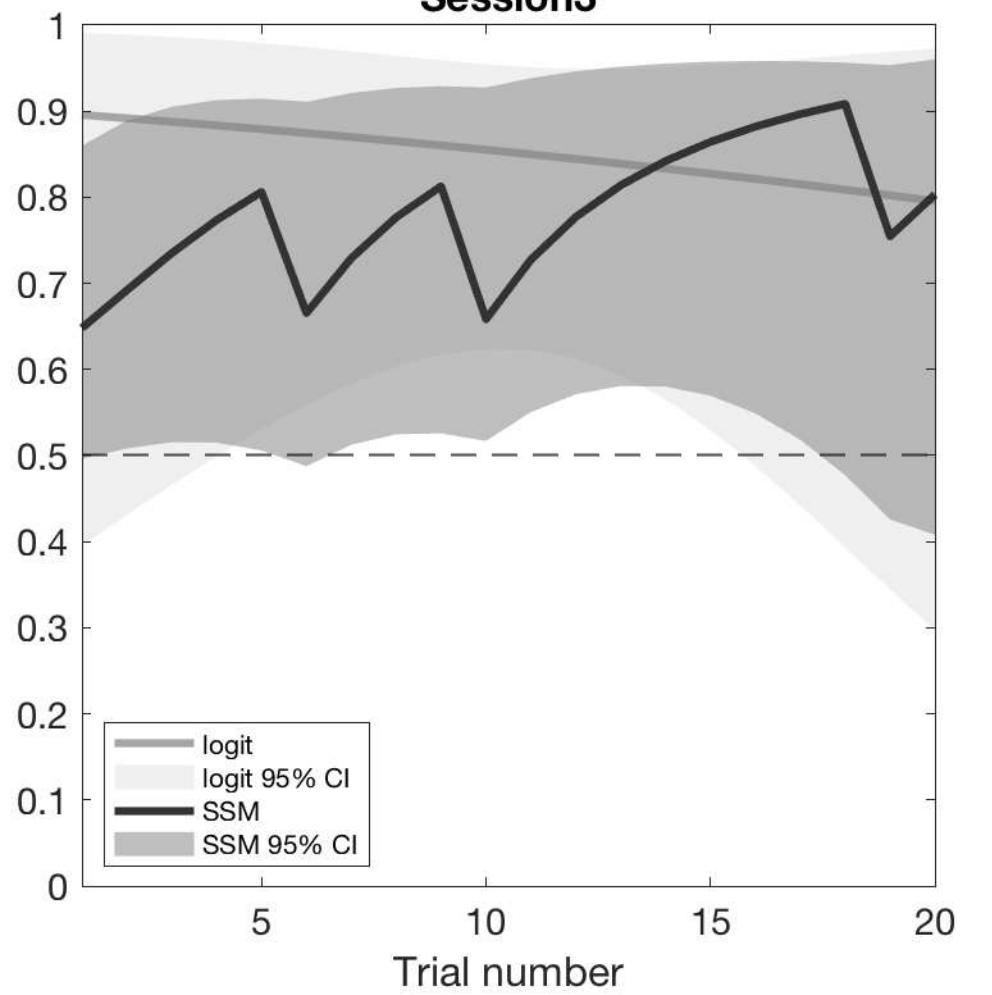
Session1



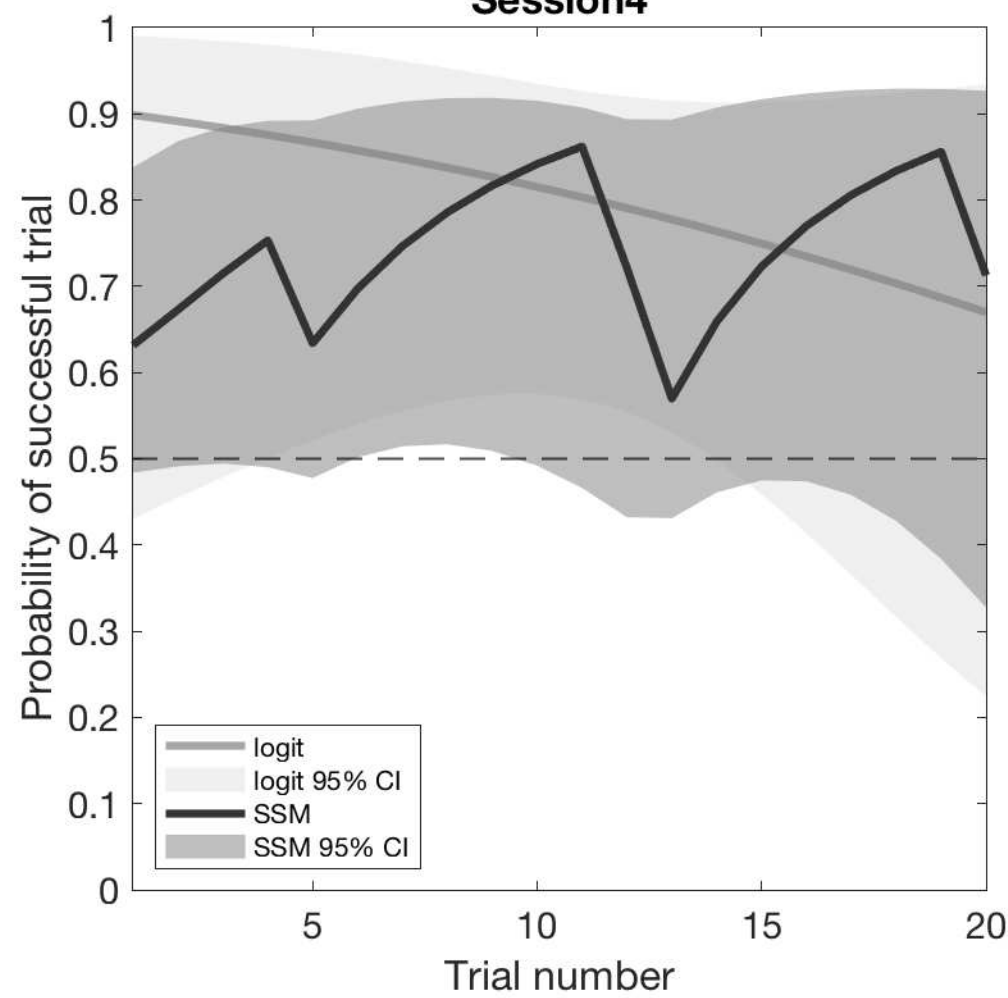
Session2



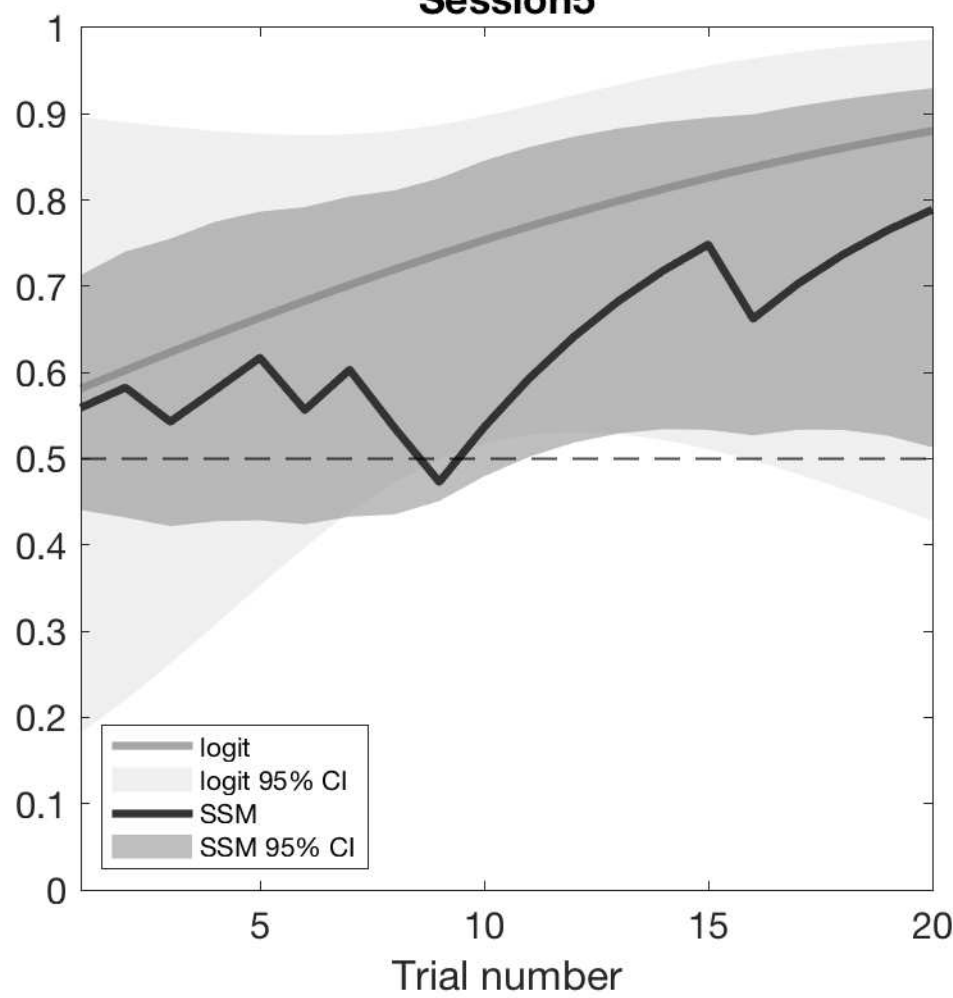
Session3



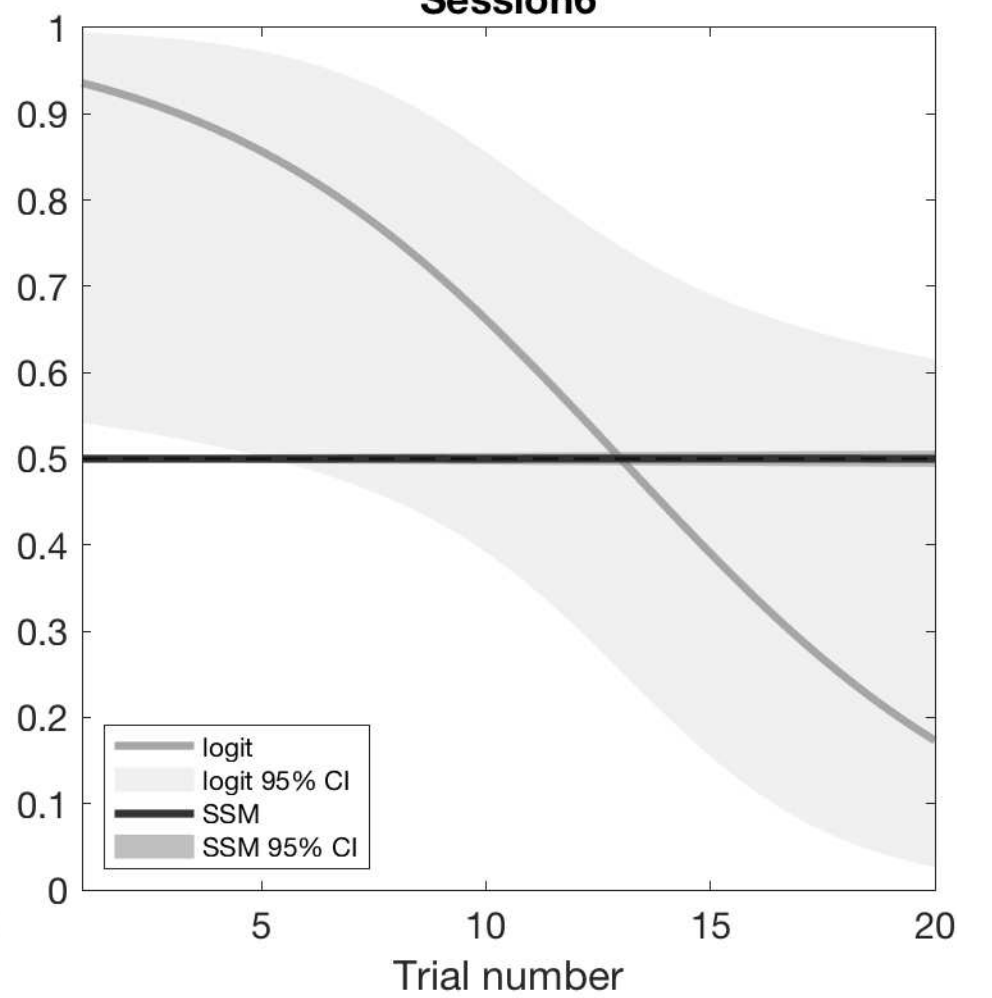
Session4



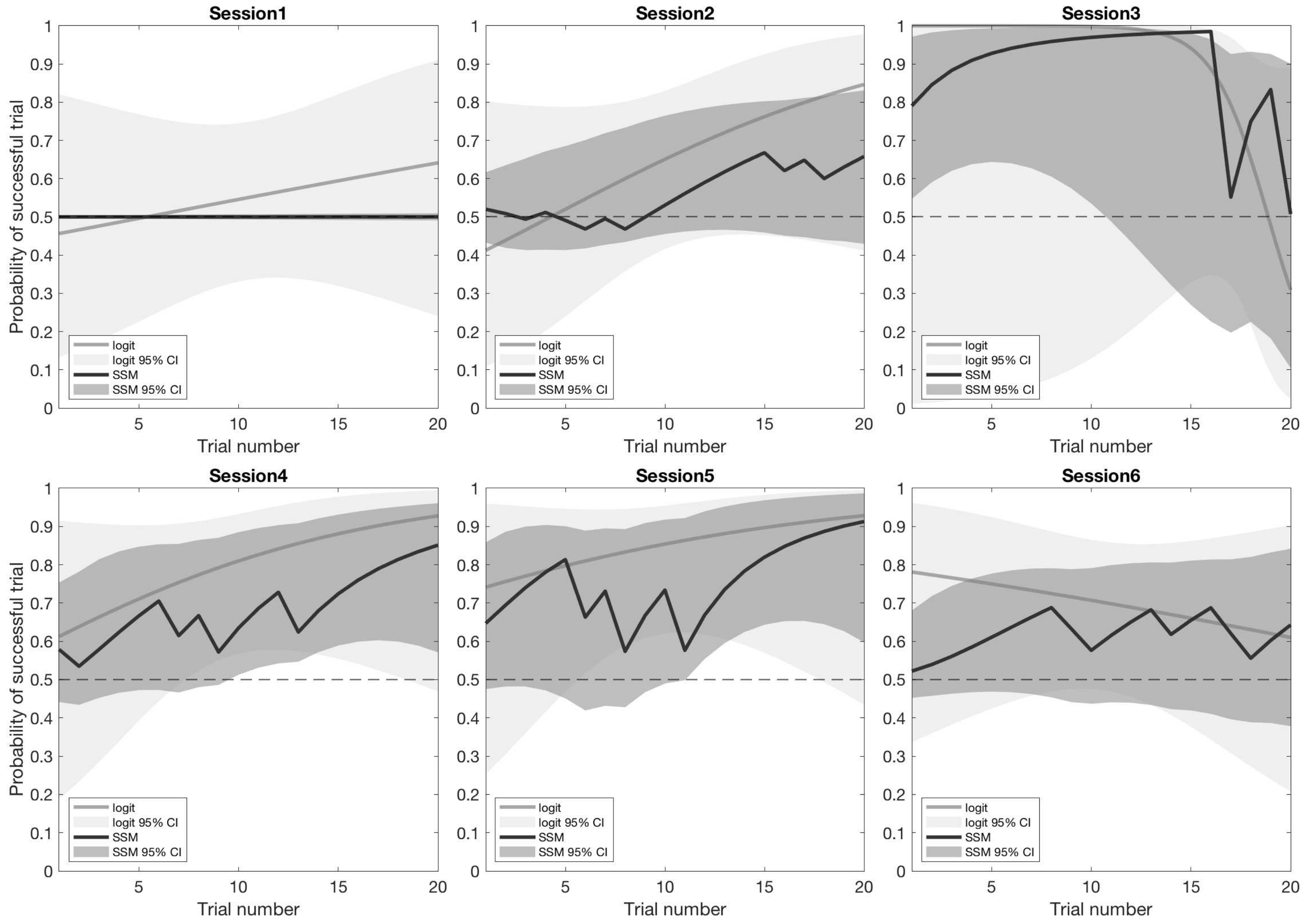
Session5



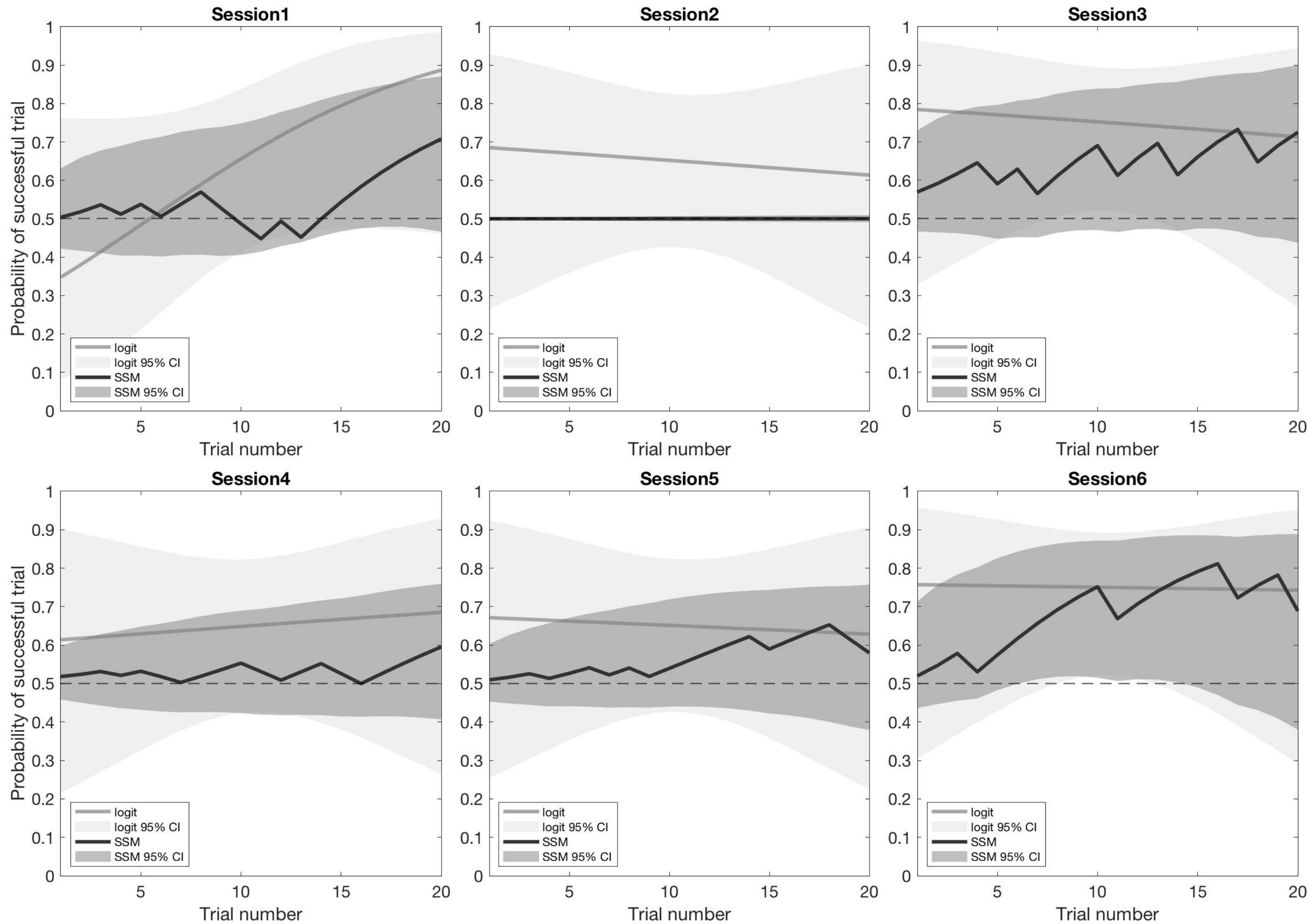
Session6



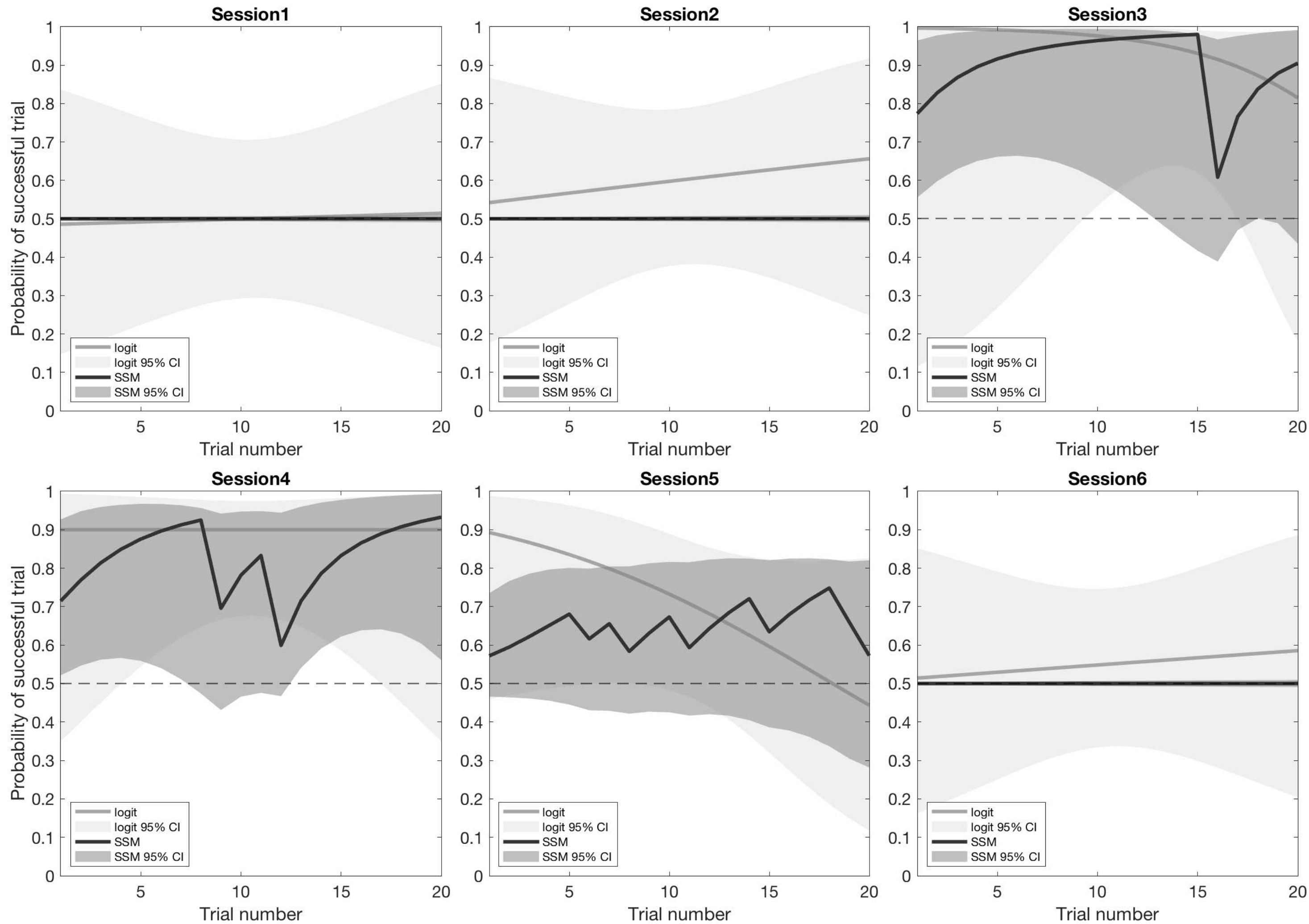
MRE-327 (CTL)



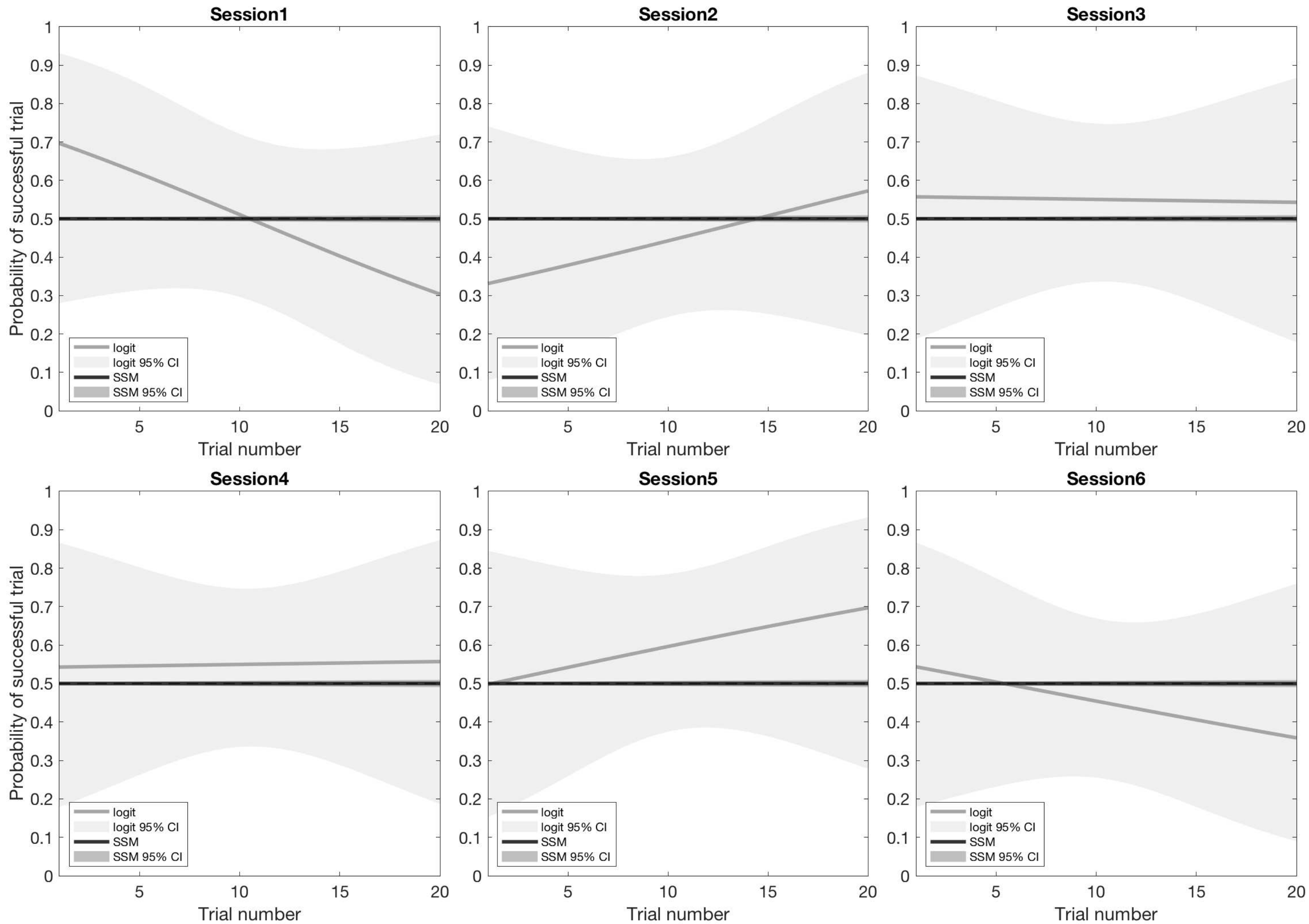
MRE-341 (V400)



MRE-342 (V400)

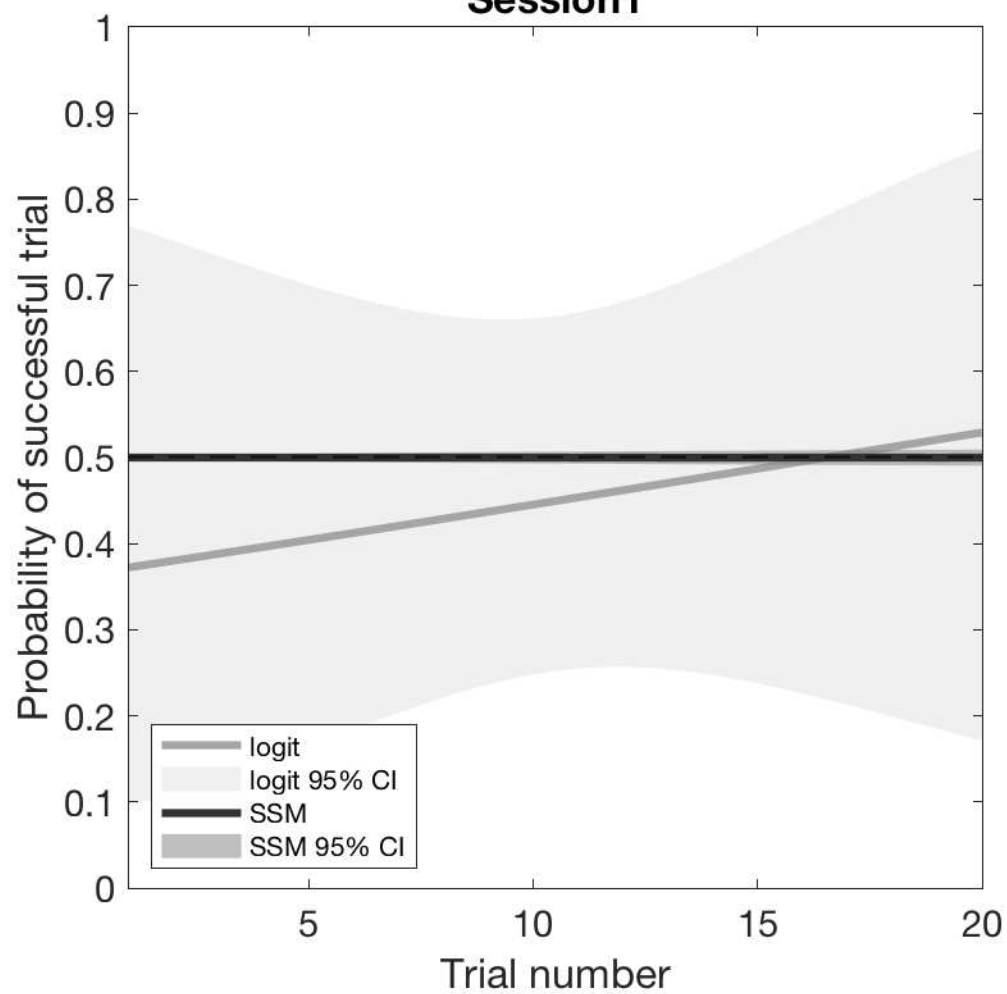


MRE-343 (V400)

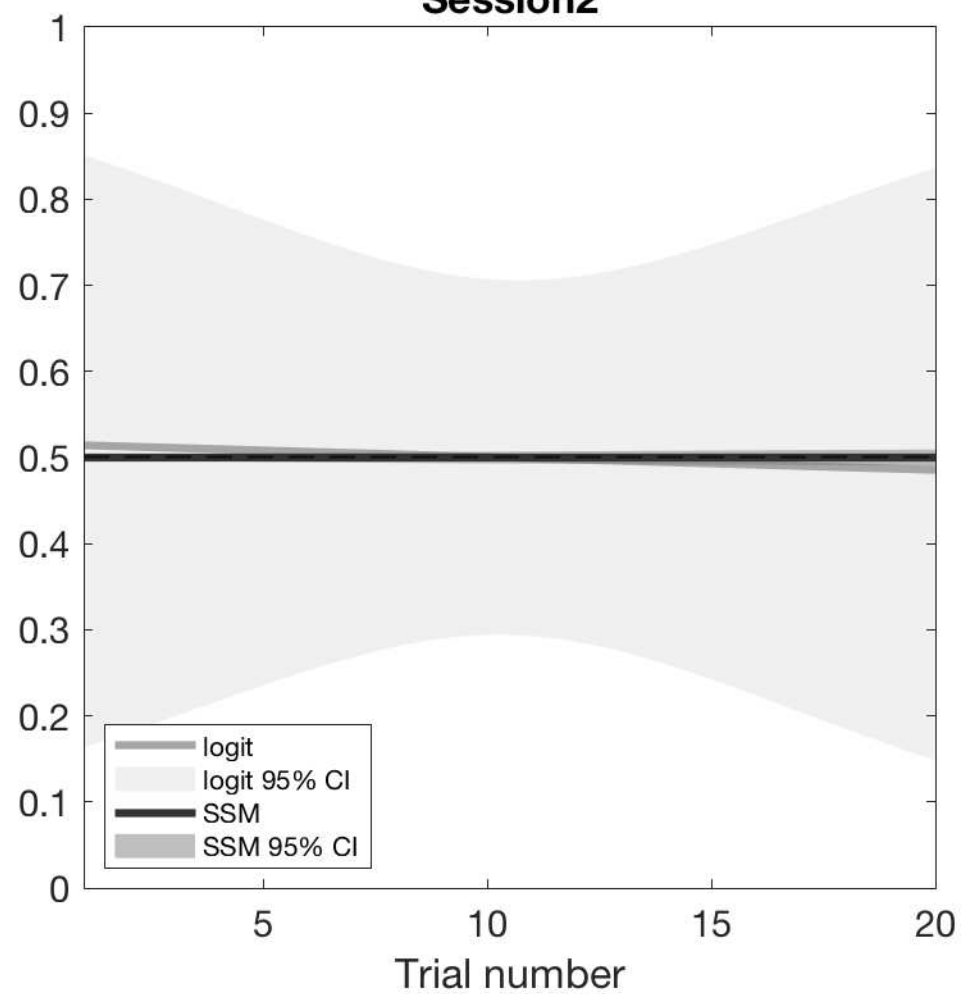


MRE-344 (V400)

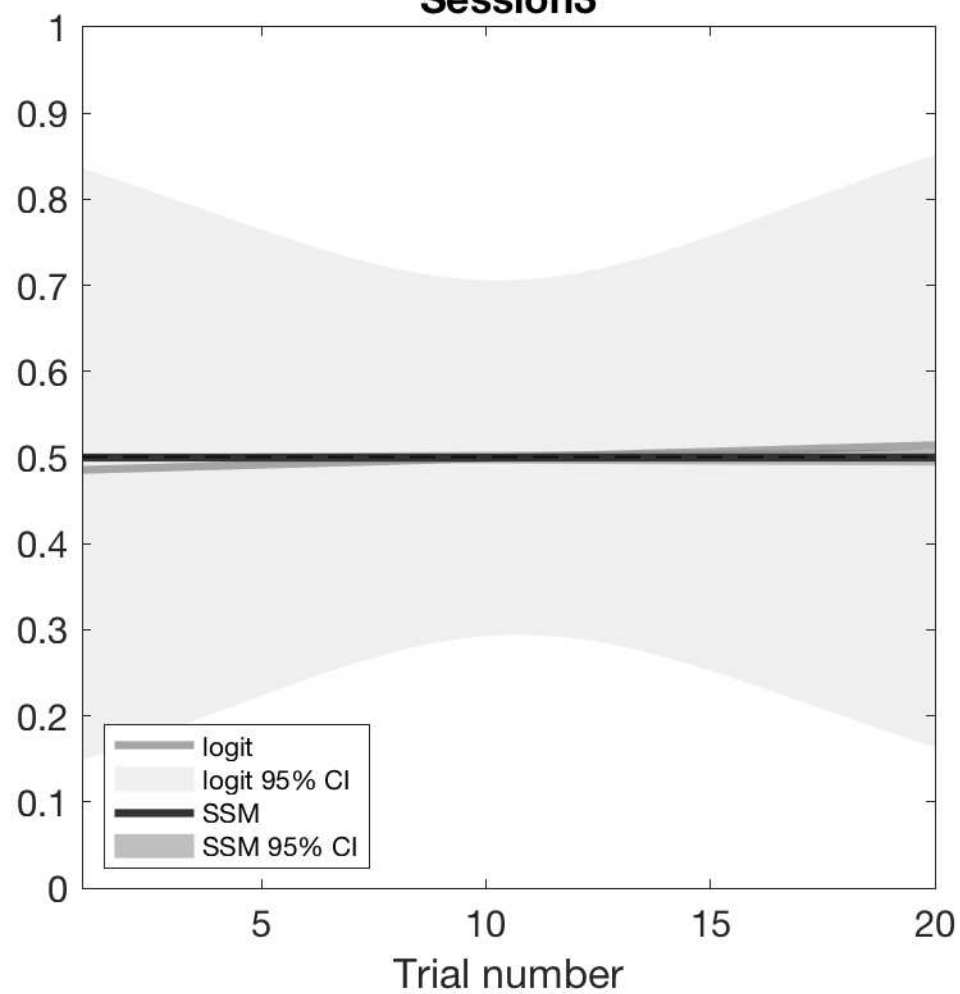
Session1



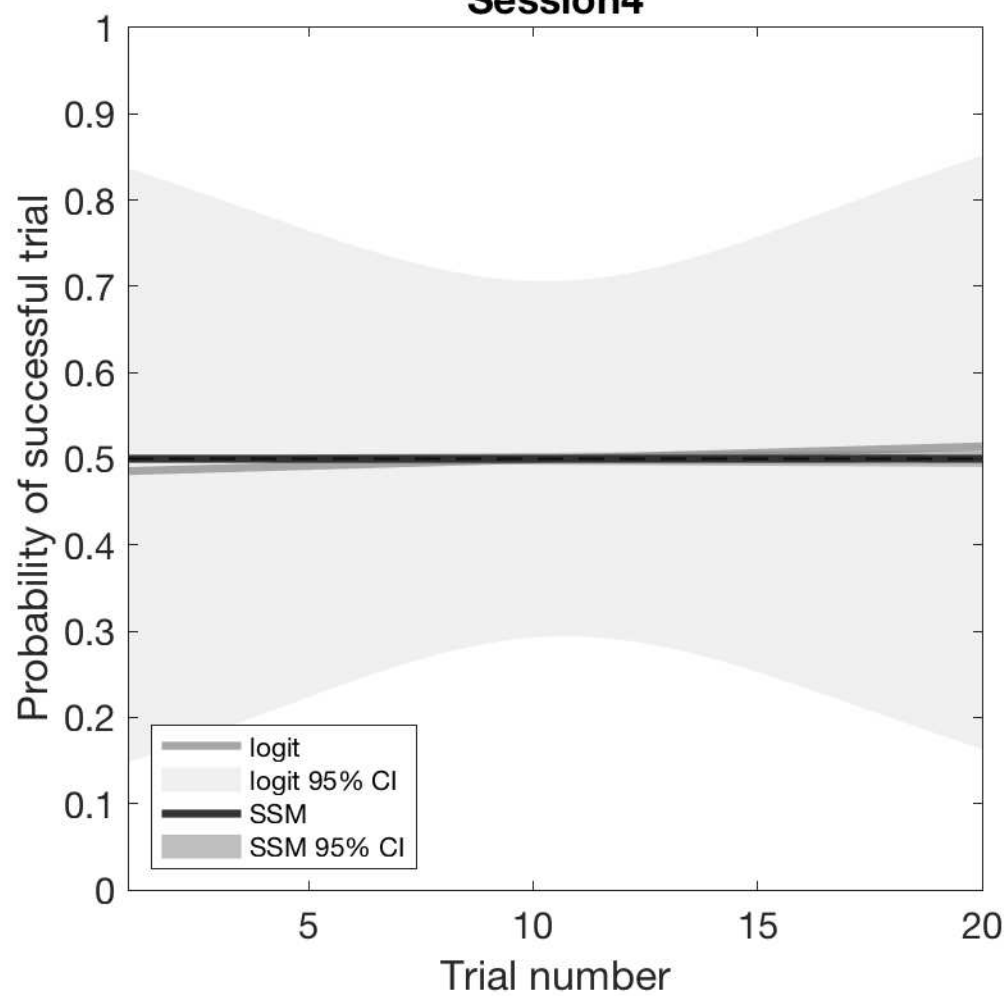
Session2



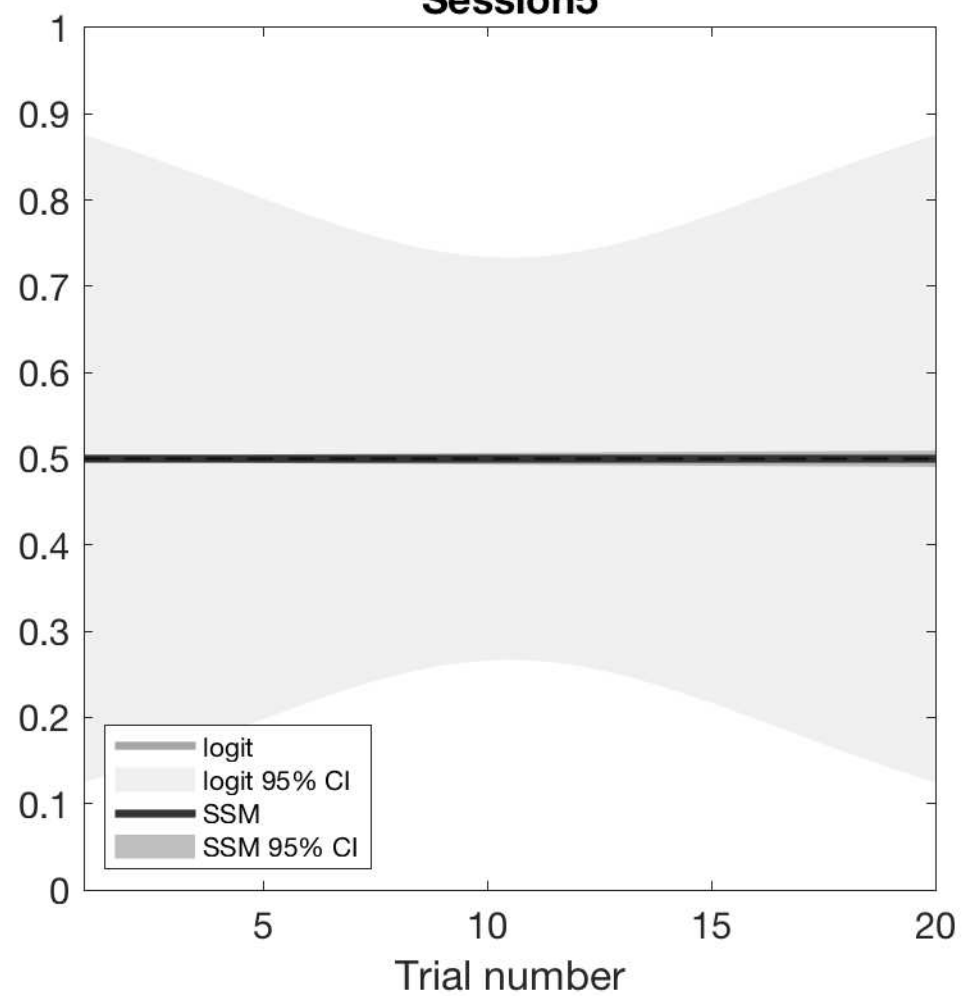
Session3



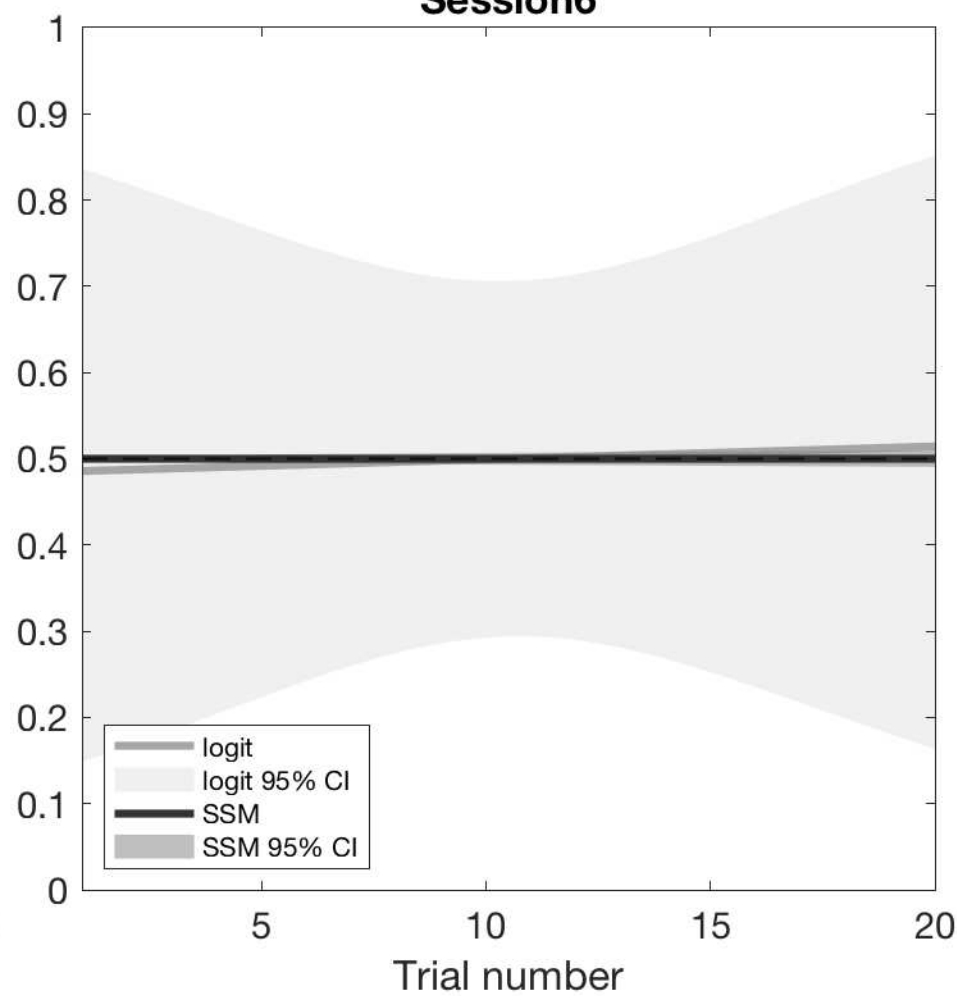
Session4



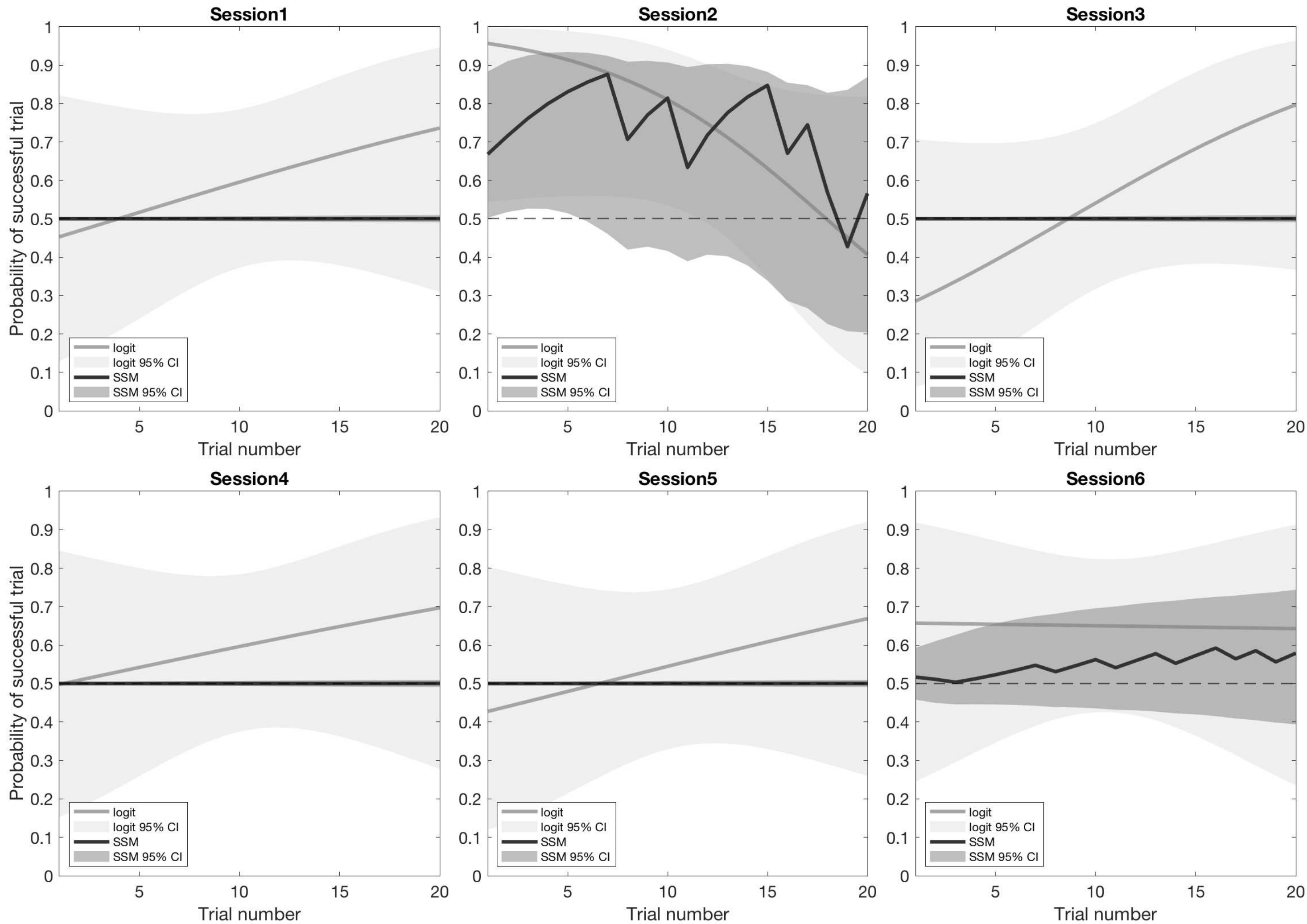
Session5



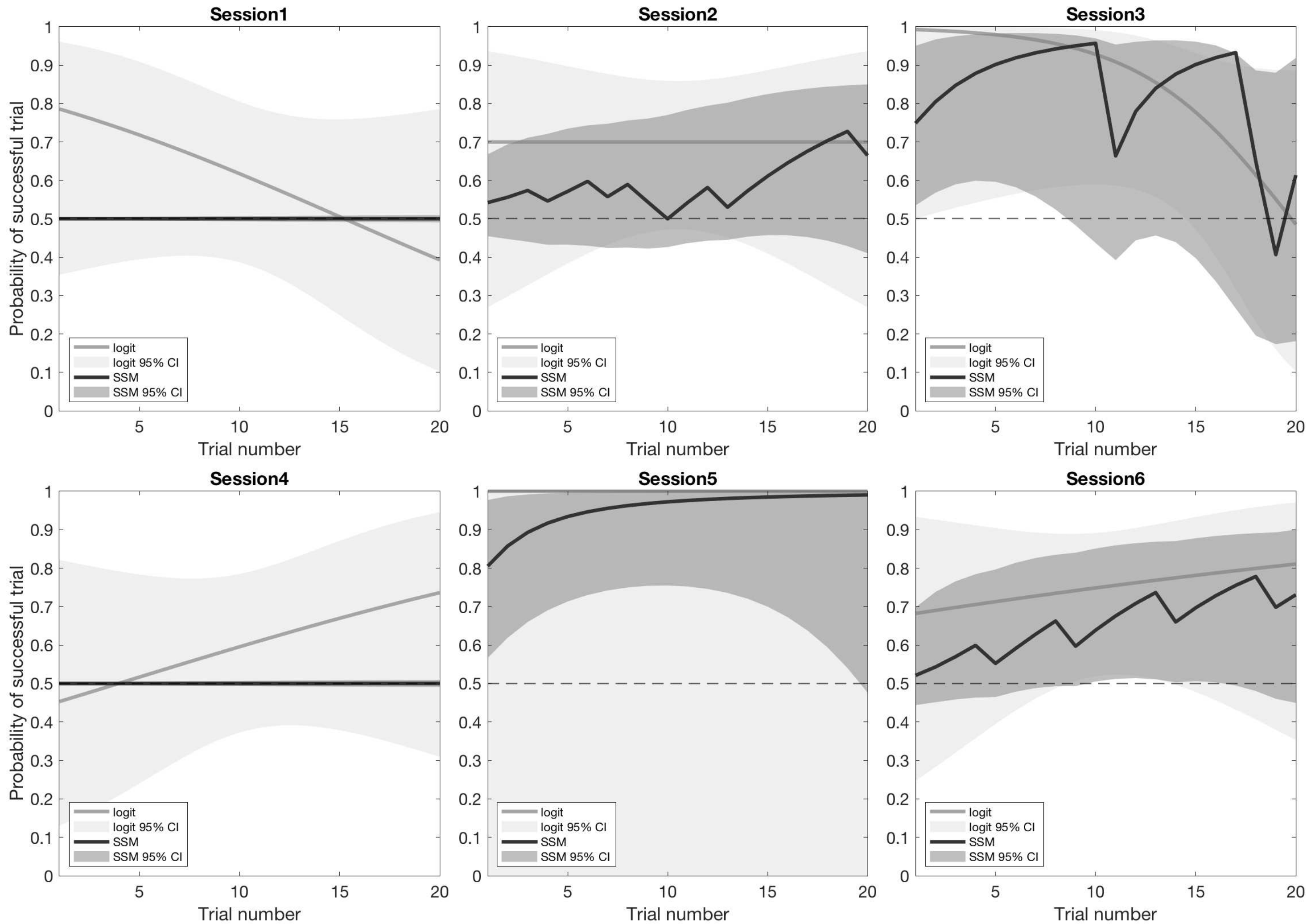
Session6



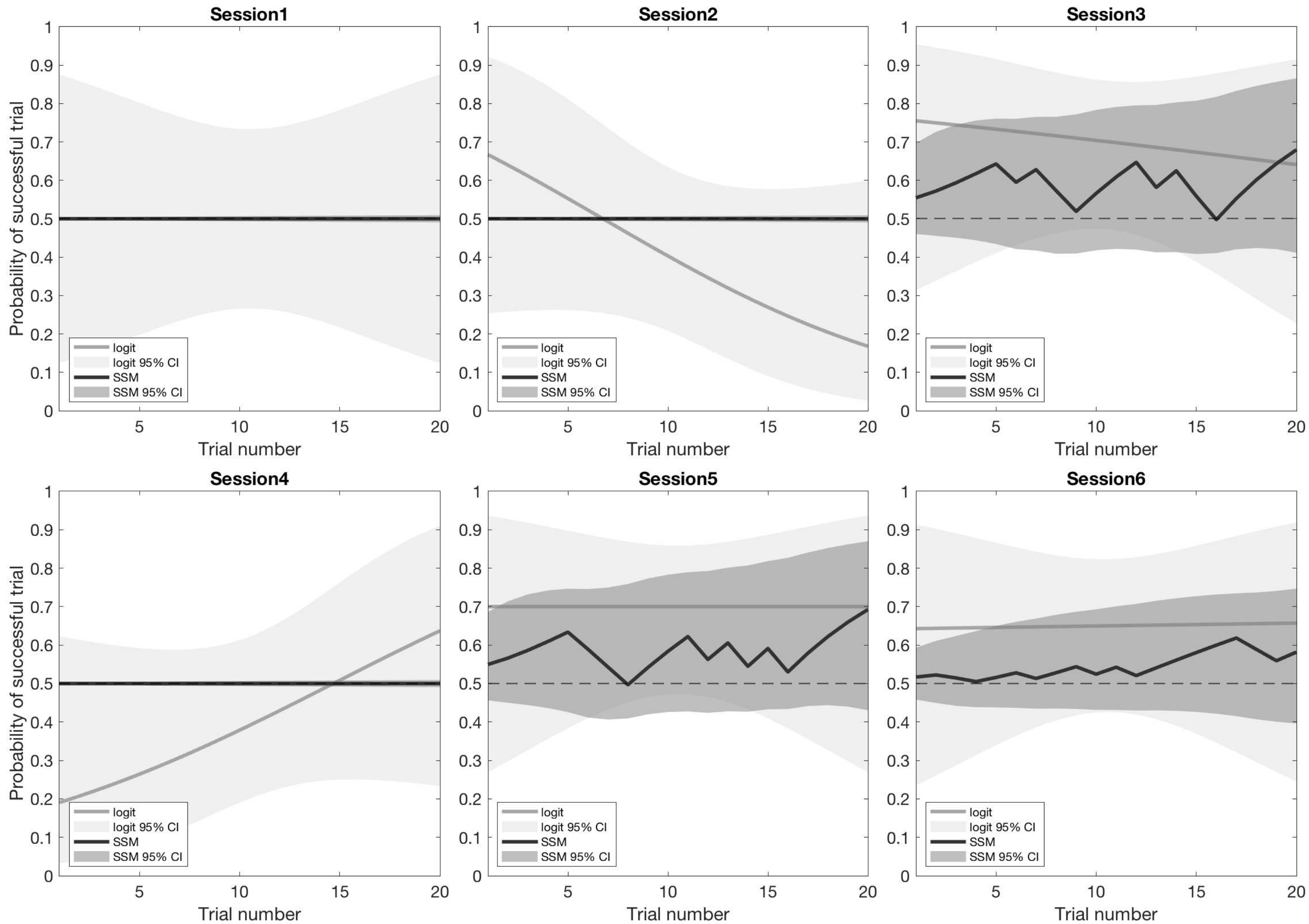
MRE-345 (V400)



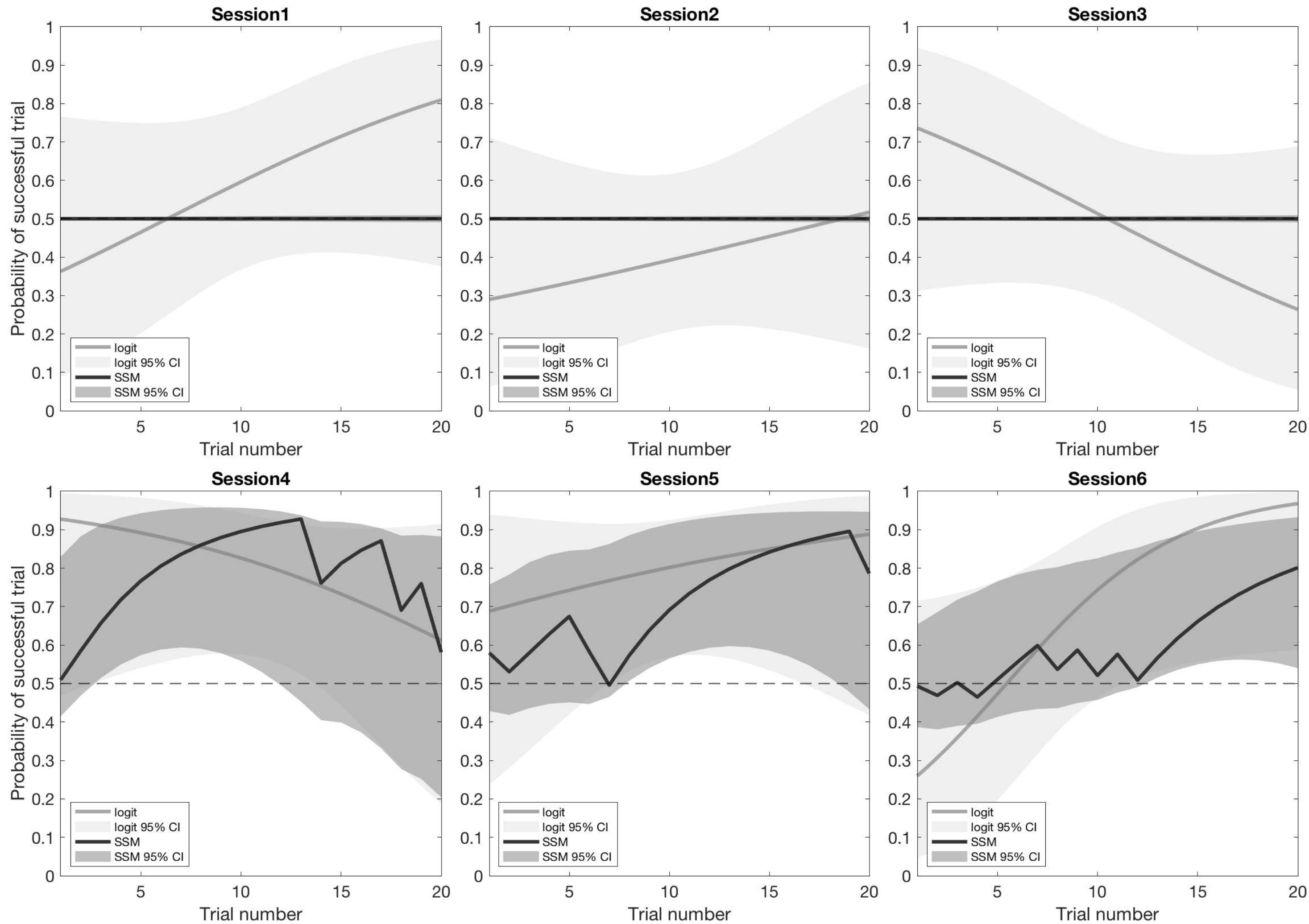
MRE-346 (V400)



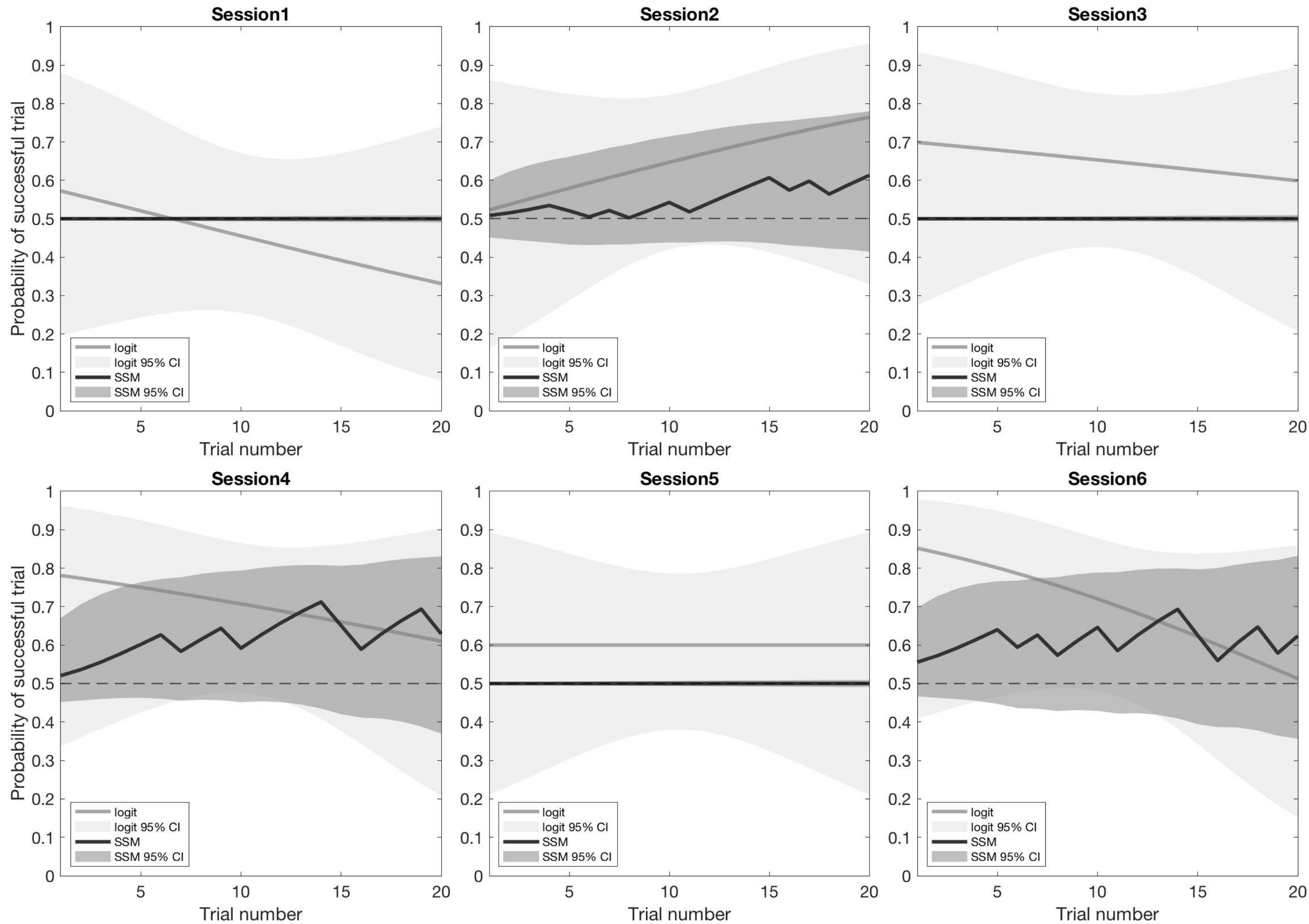
MRE-378 (V600)



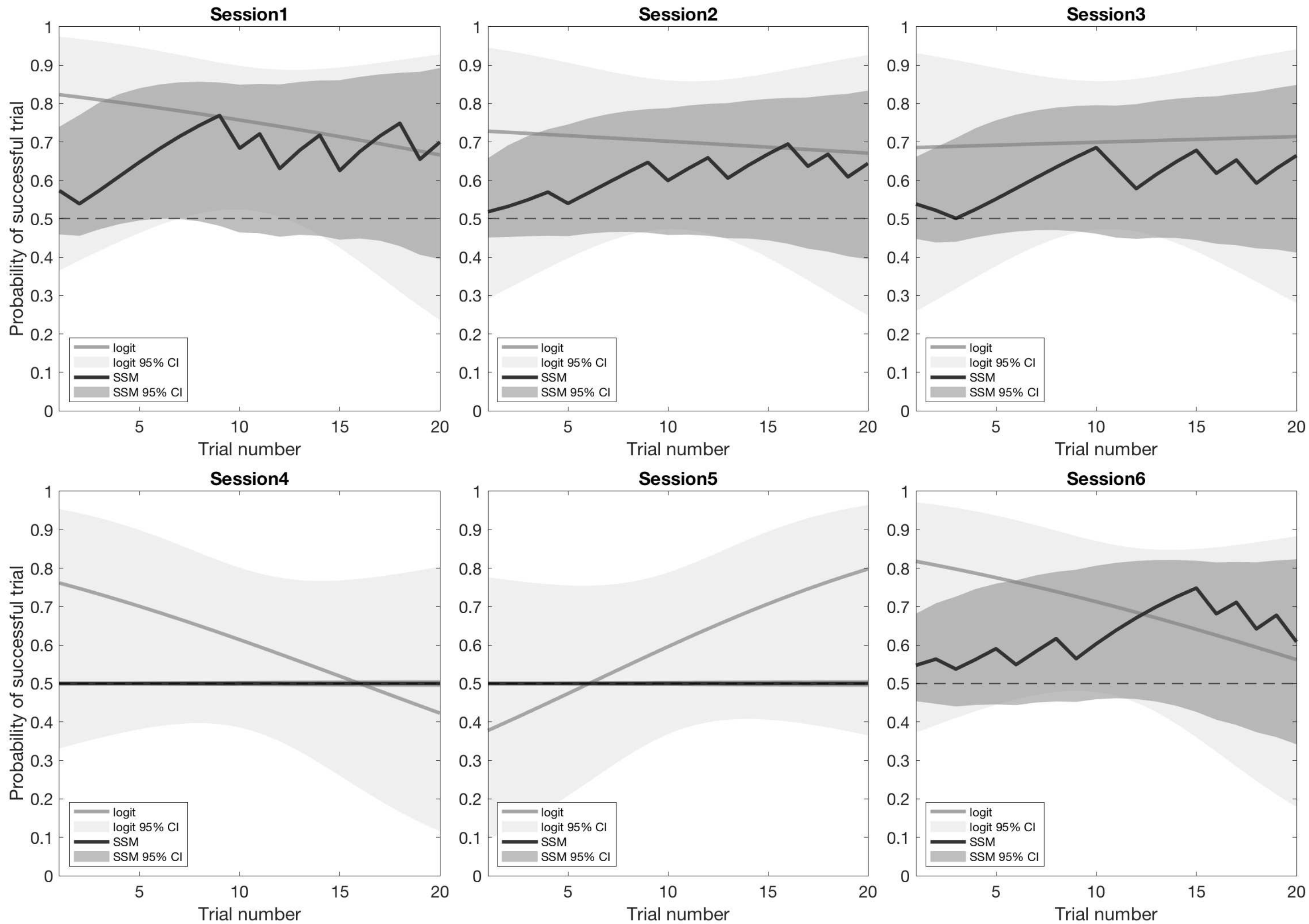
MRE-379 (V600)



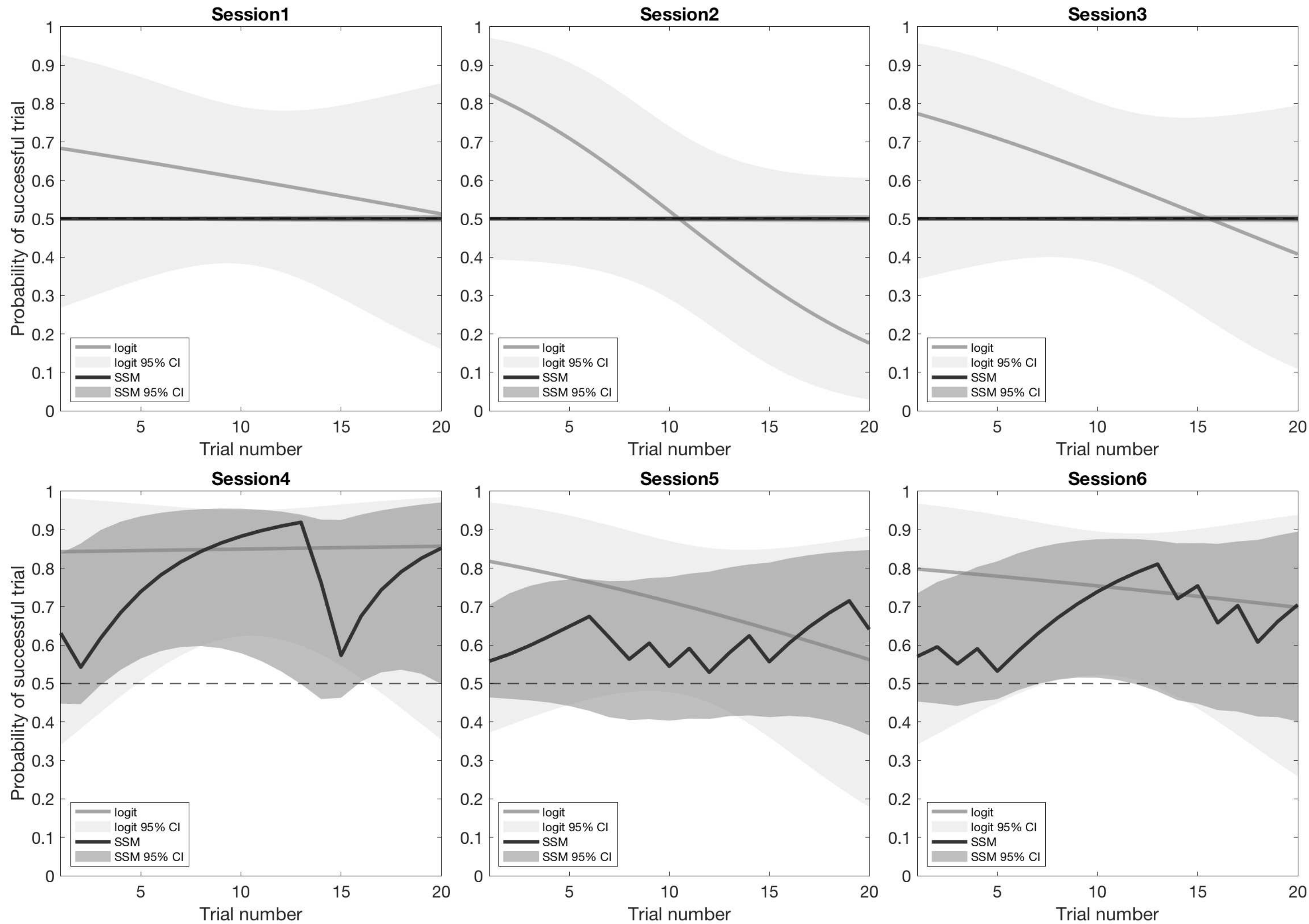
MRE-380 (V600)



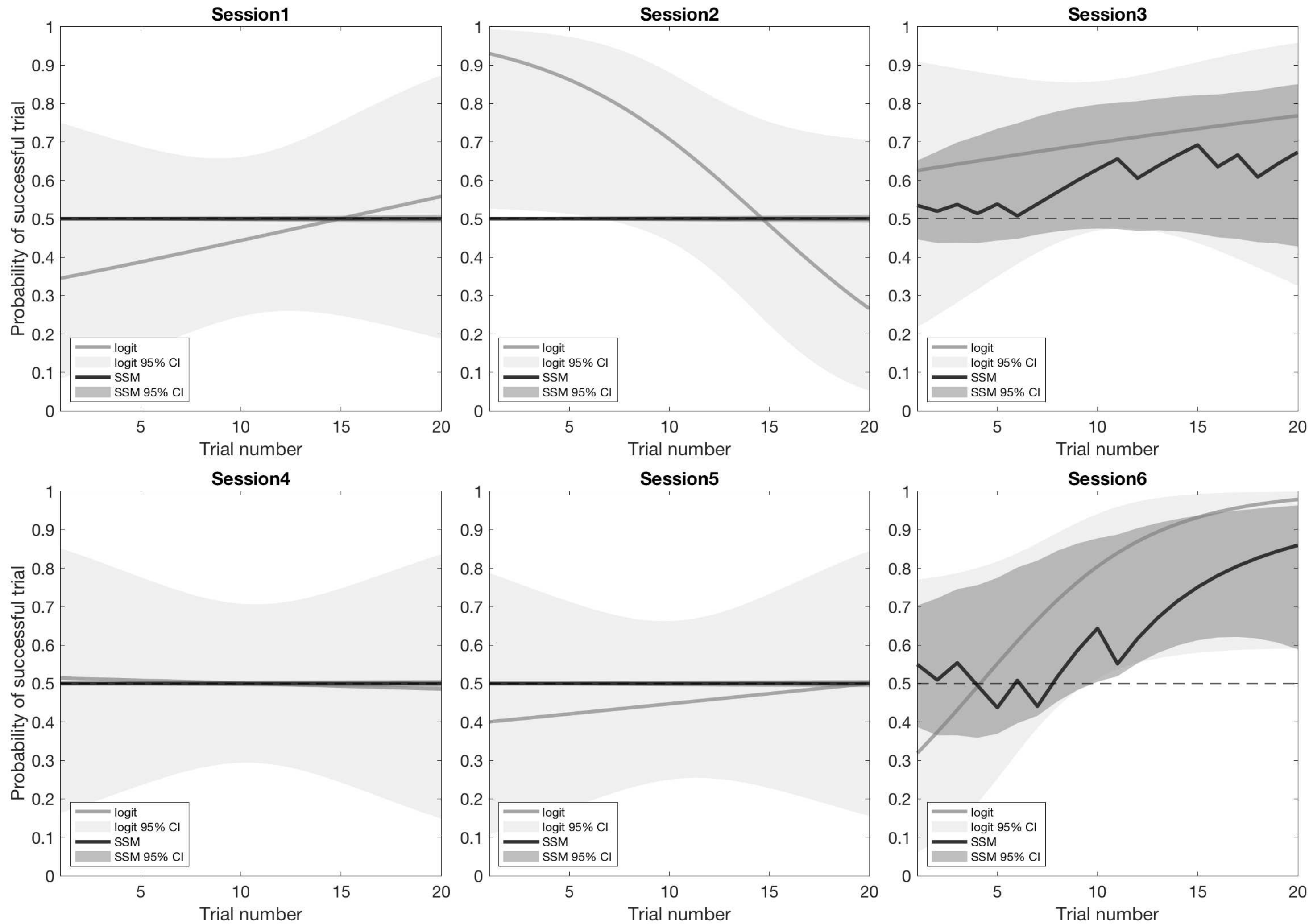
MRE-389 (V600)



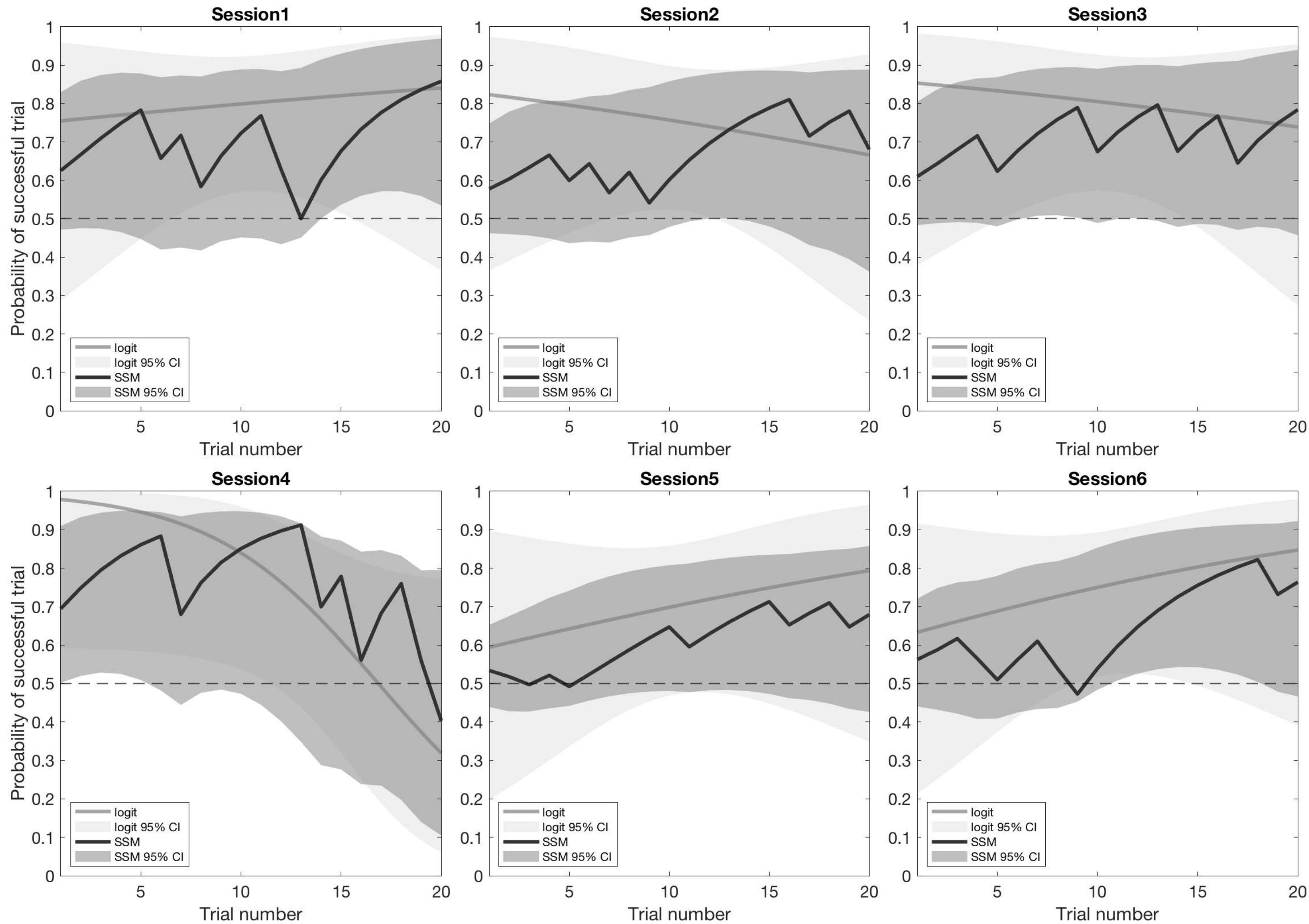
MRE-390 (V600)



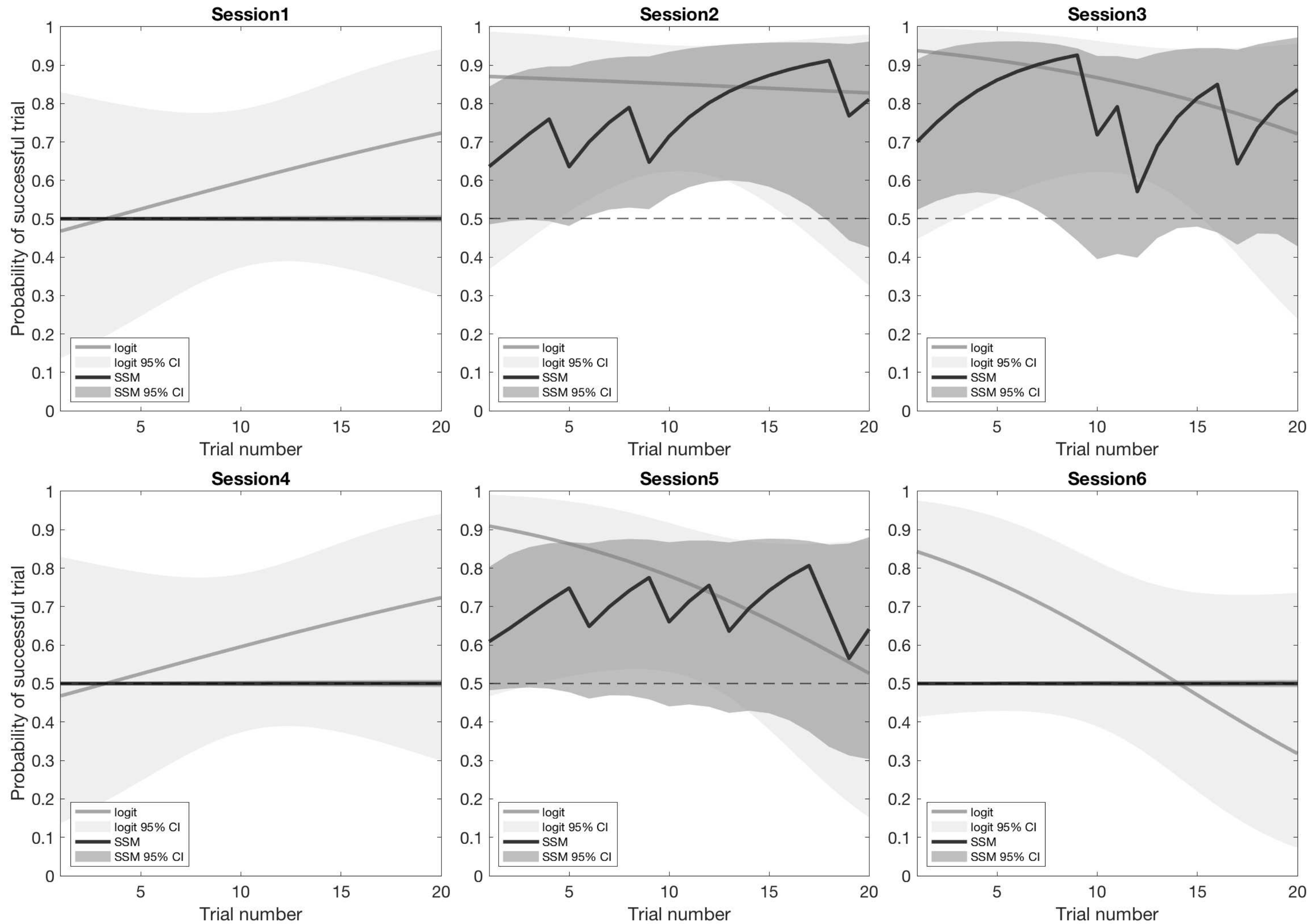
MRE-391 (V600)



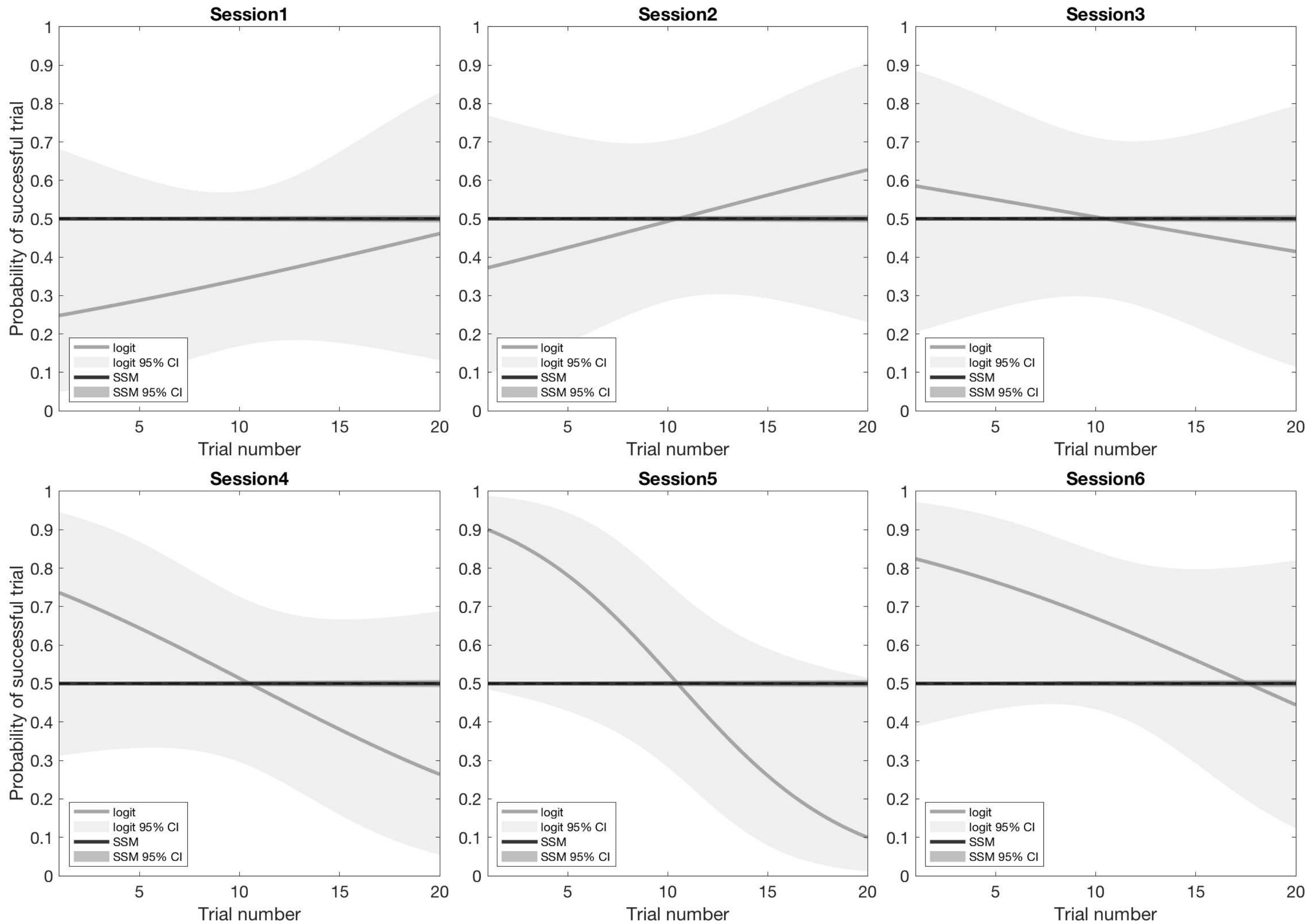
MRE-392 (V600)



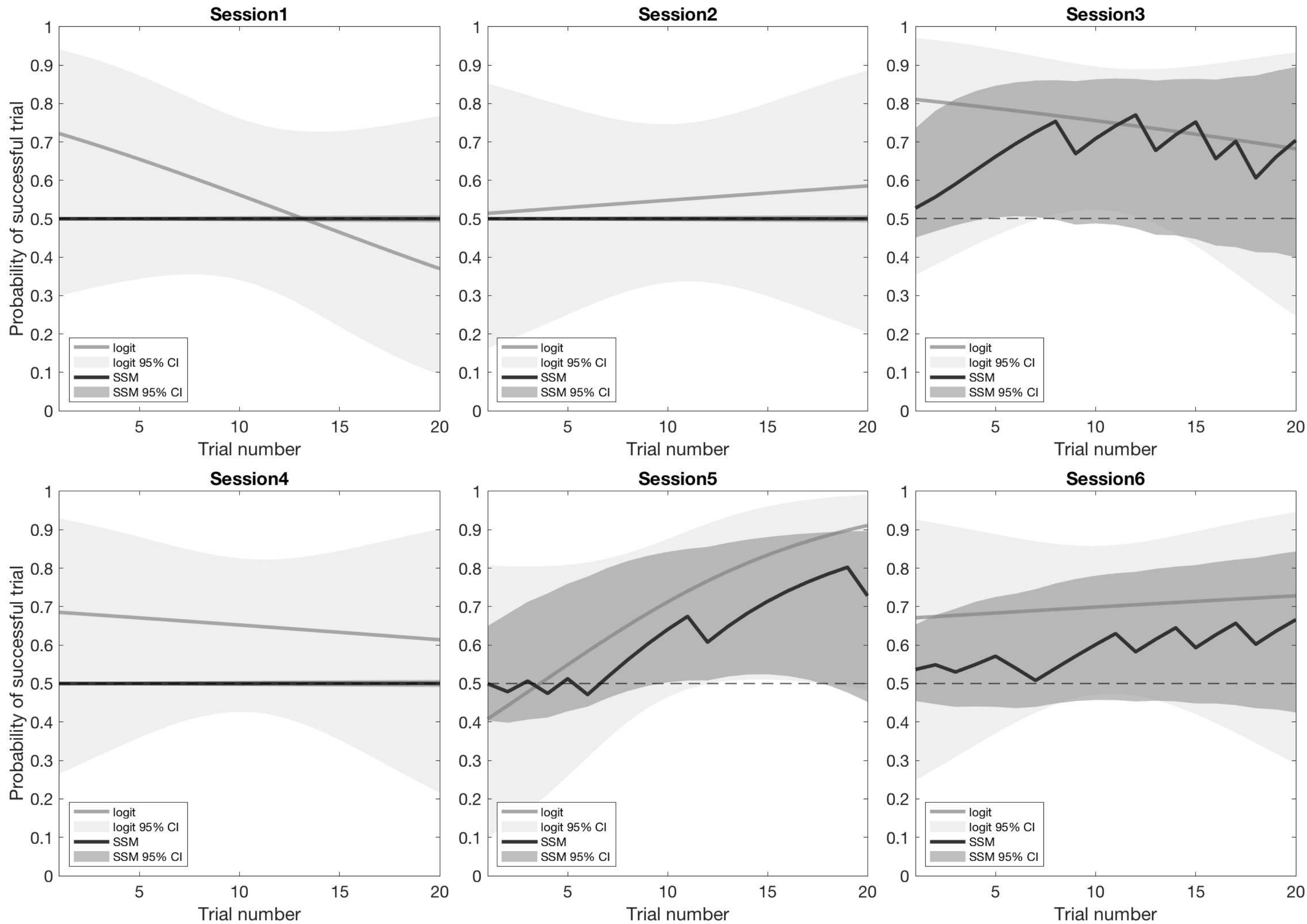
MRE-393 (V600)



MRE-394 (V600)

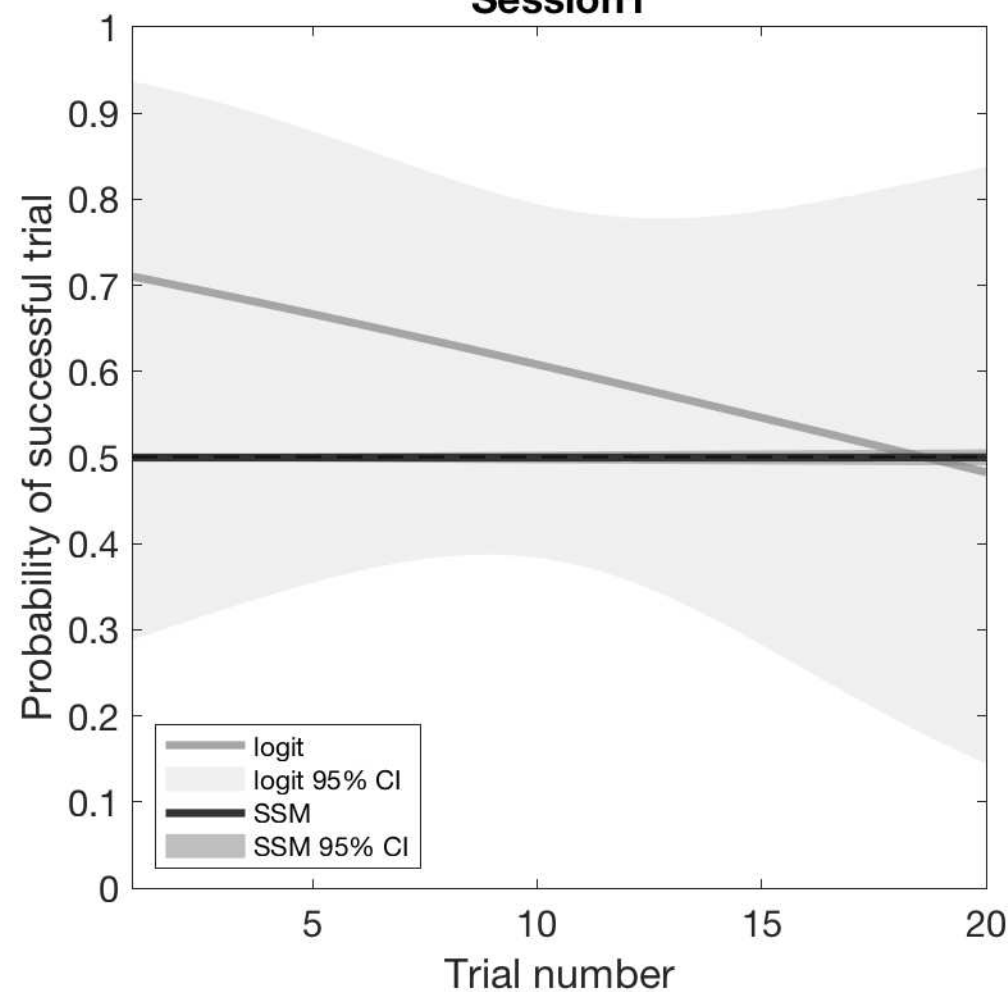


MRE-407 (V600)

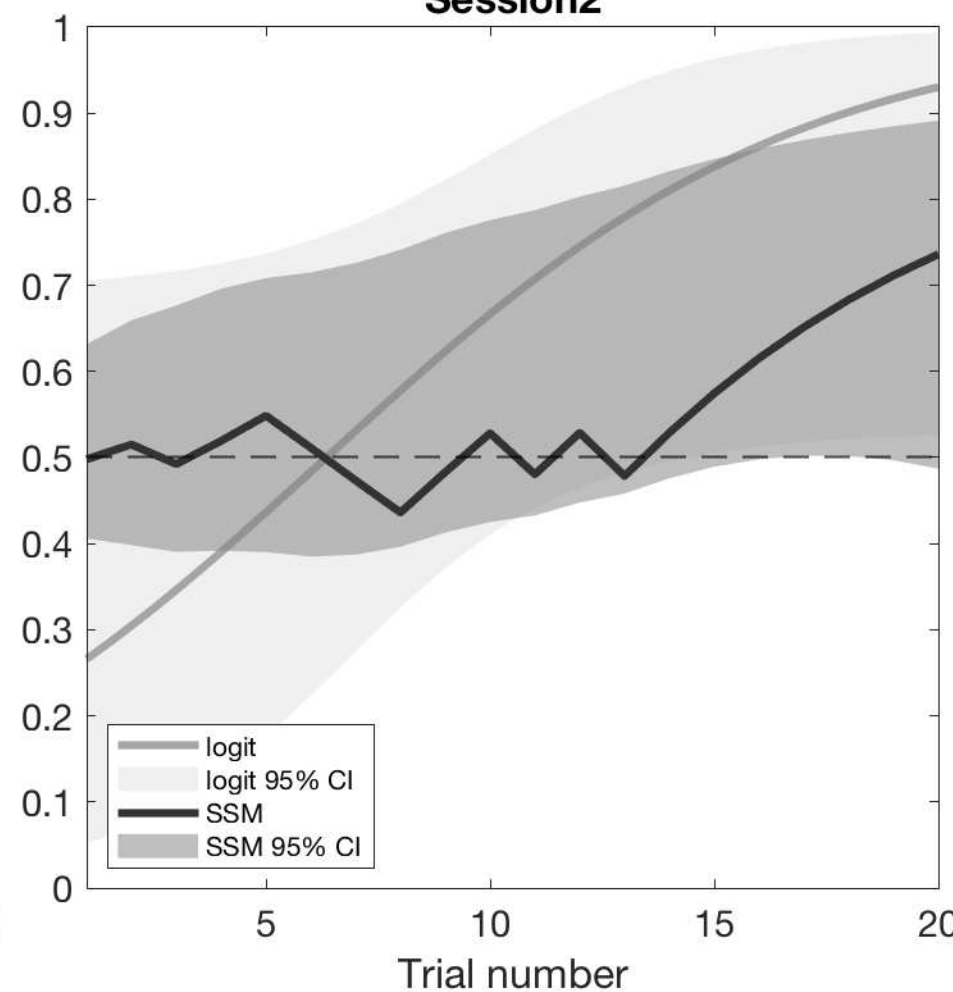


MRE-408 (V600)

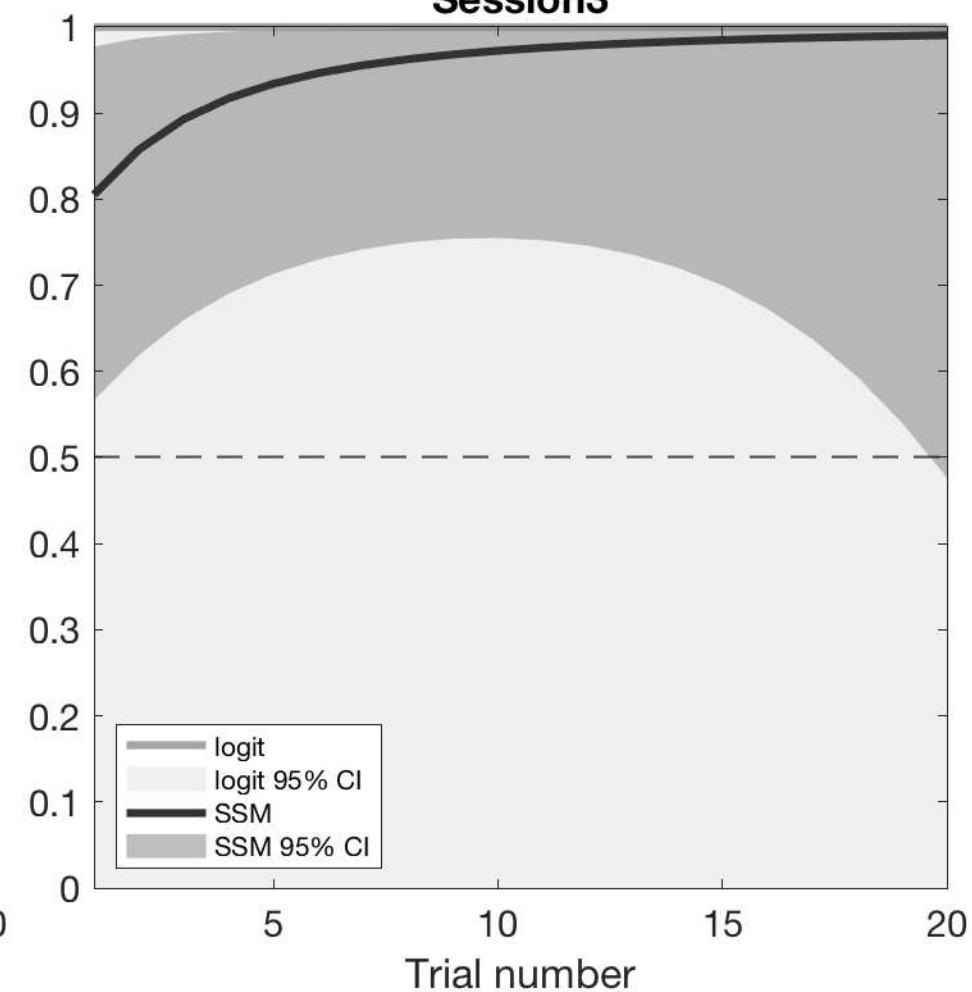
Session1



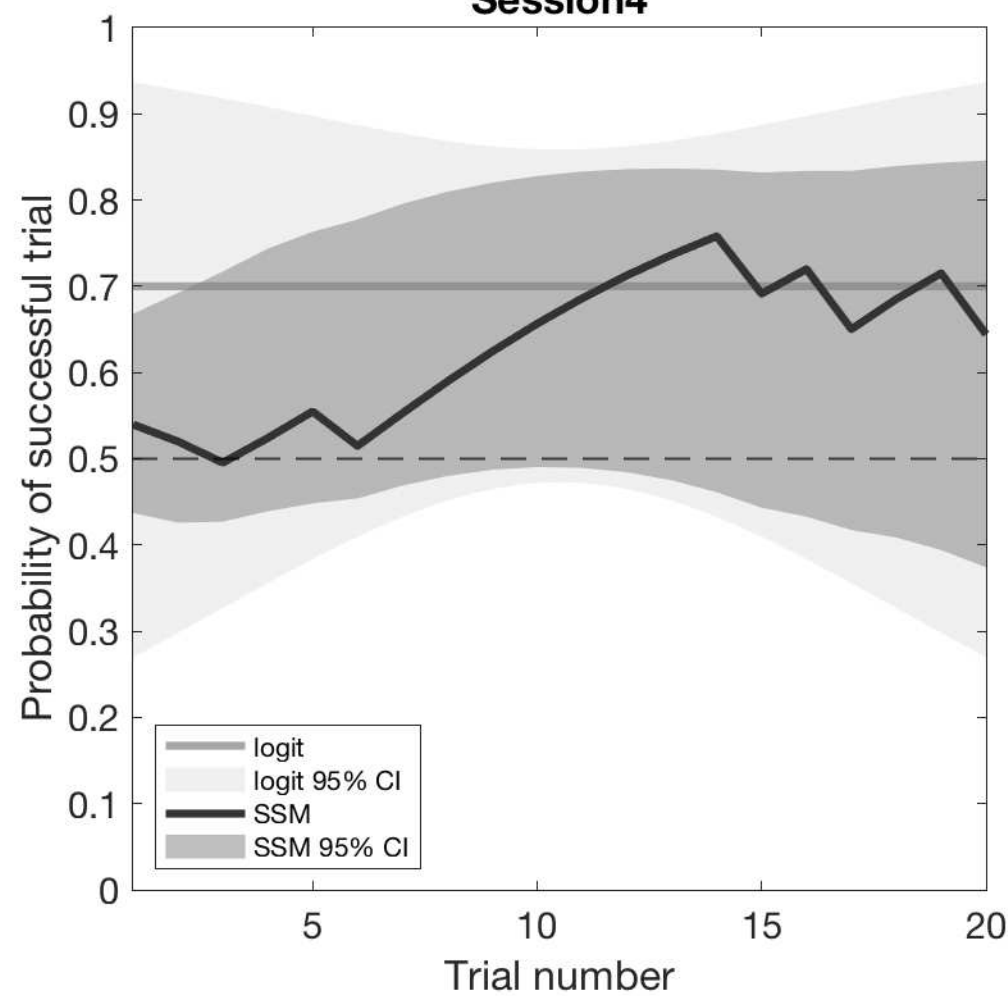
Session2



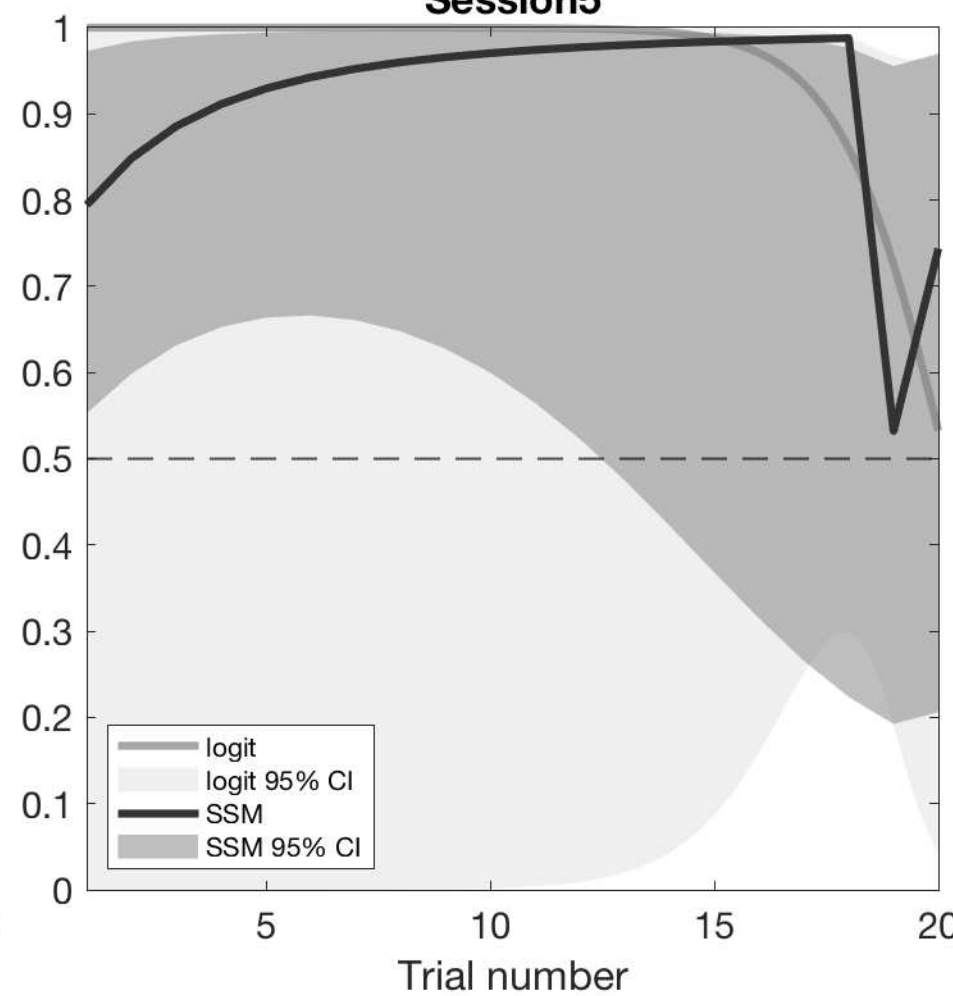
Session3



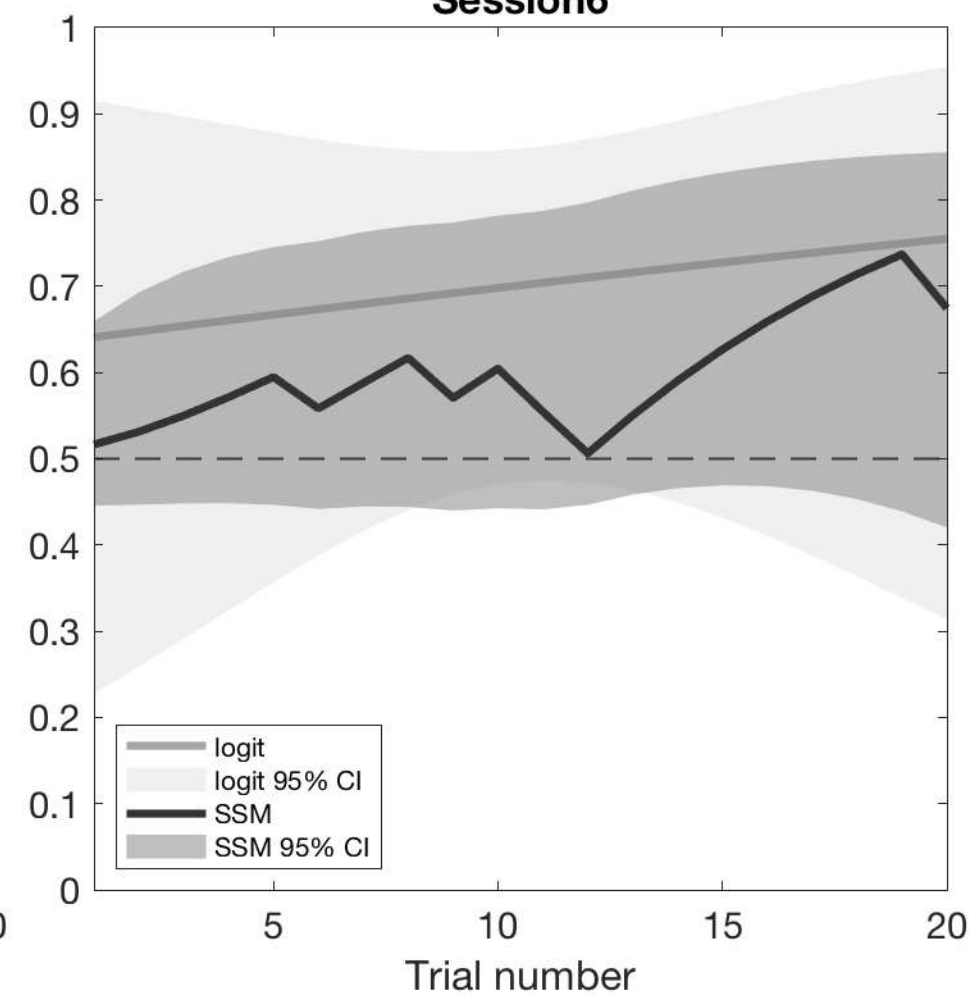
Session4



Session5

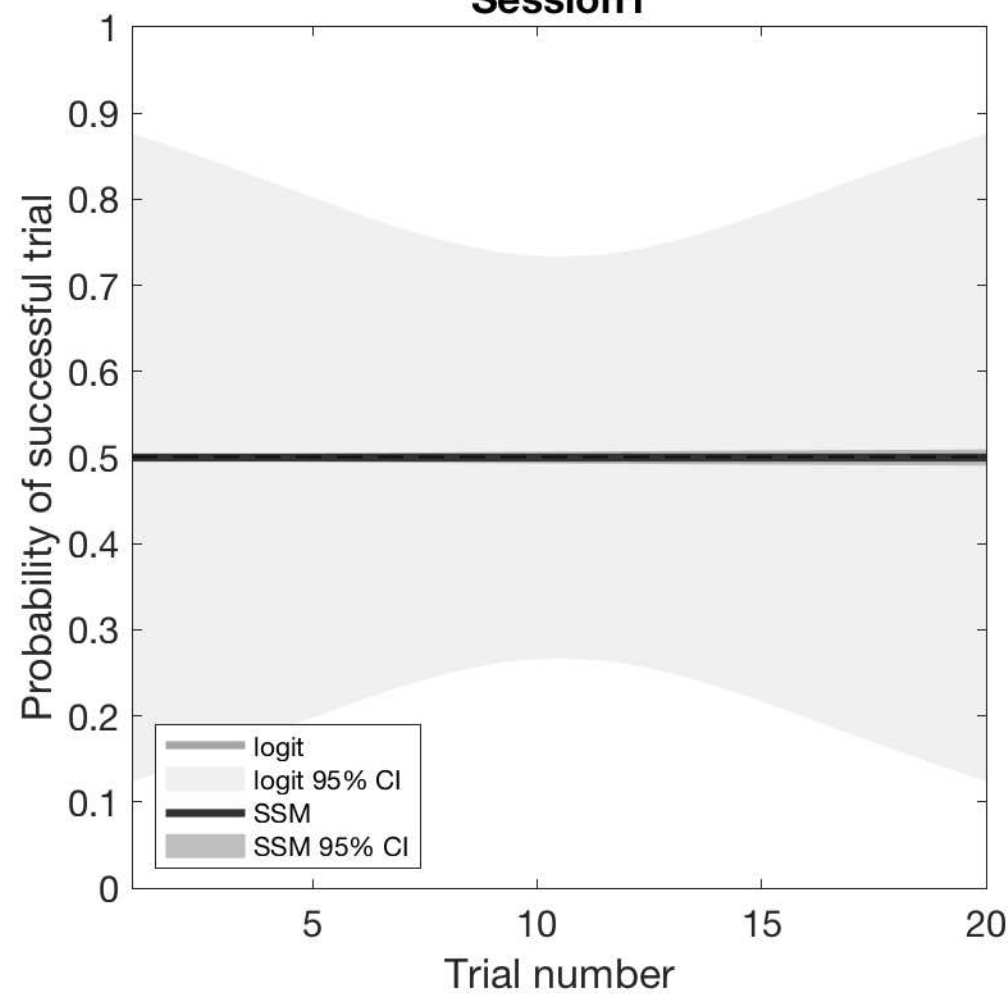


Session6

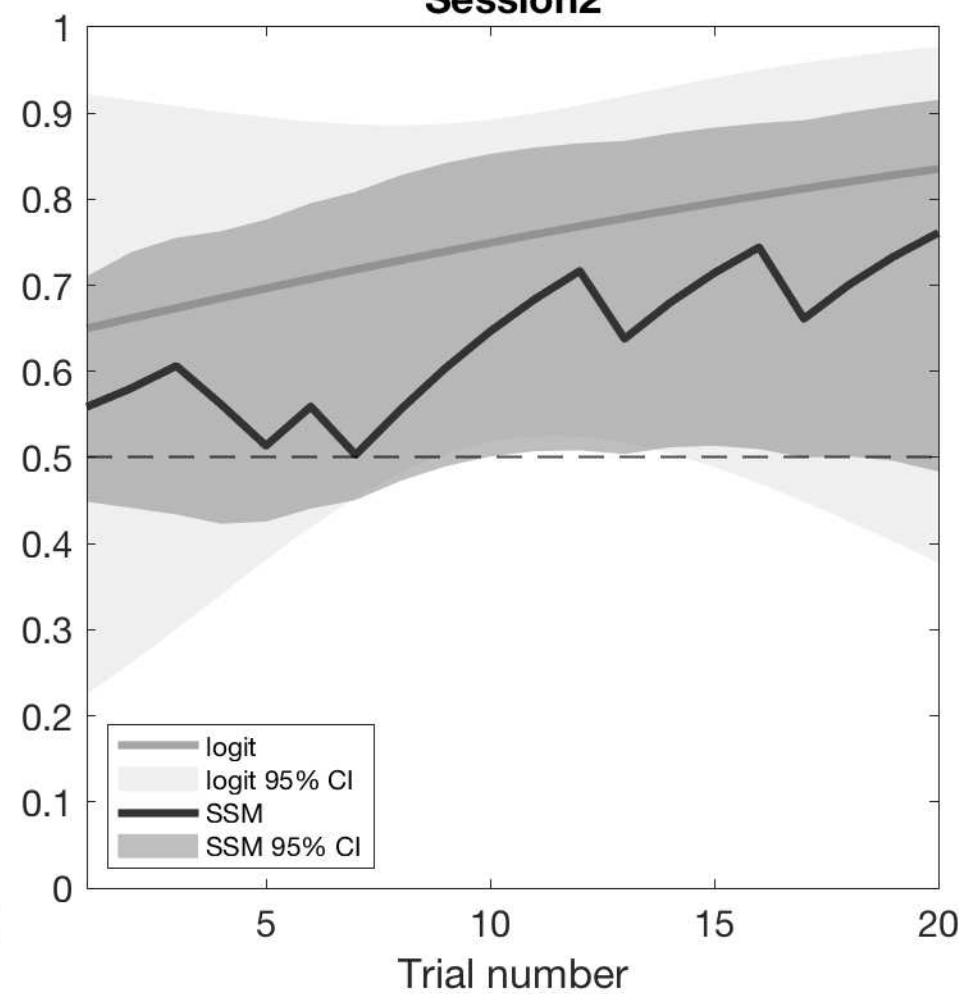


MRE-409 (V600)

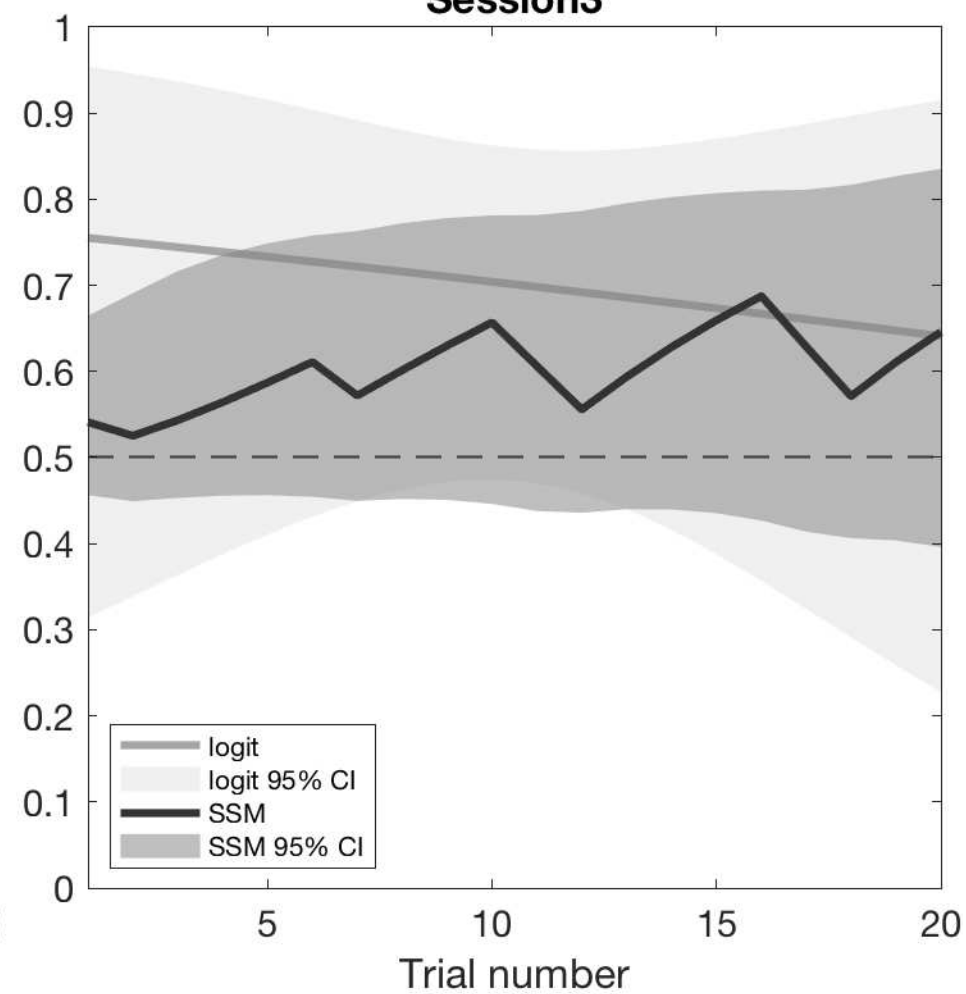
Session1



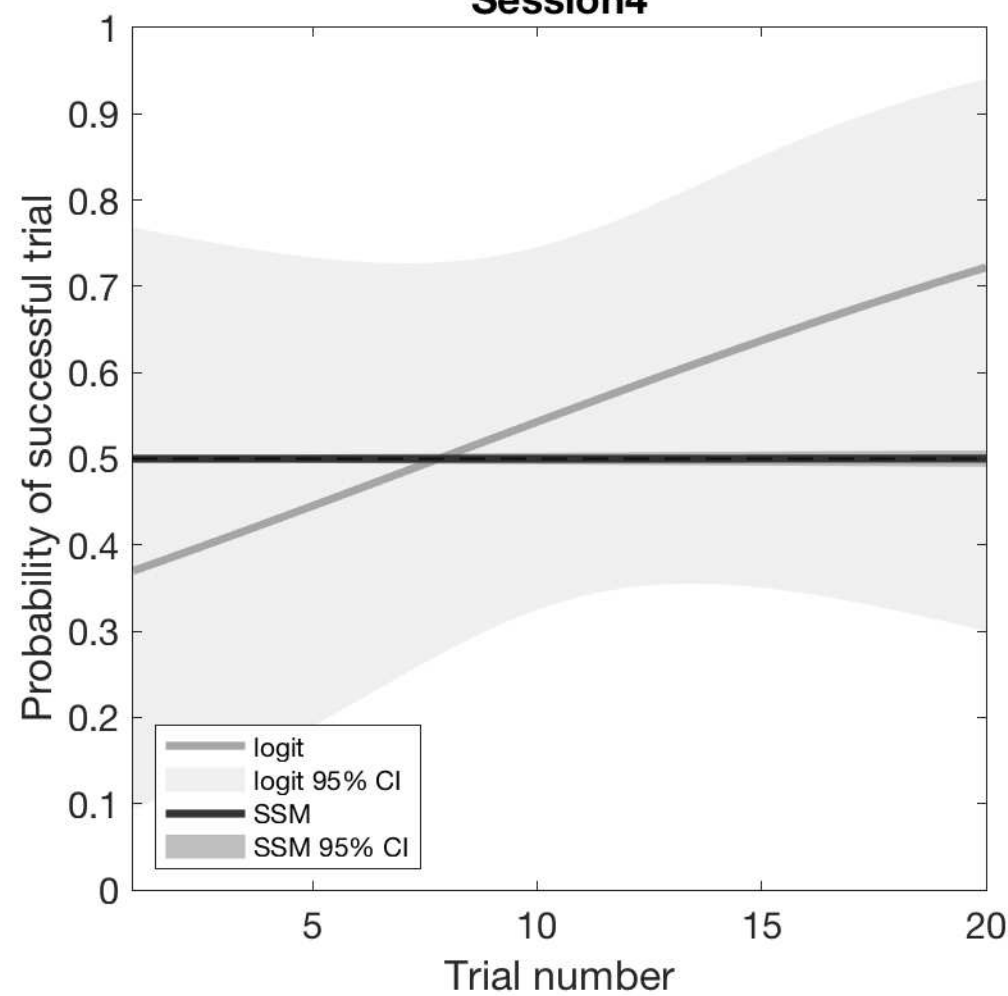
Session2



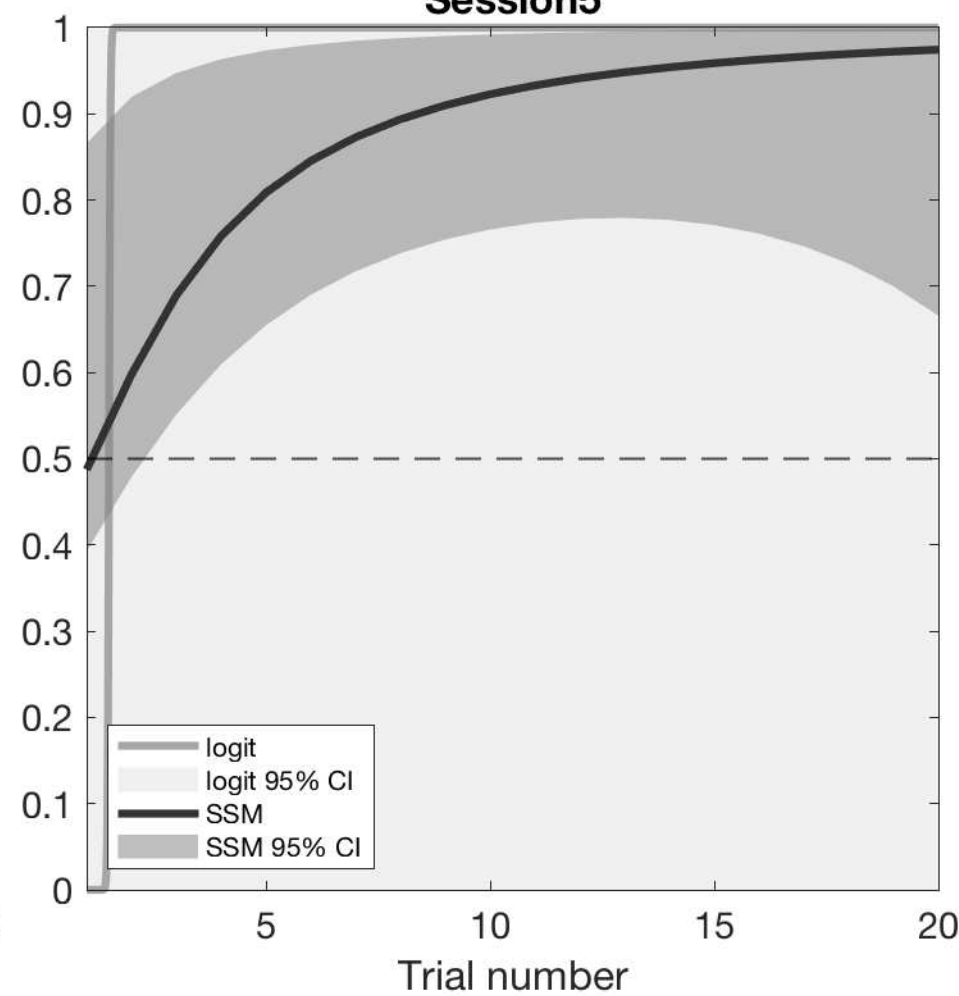
Session3



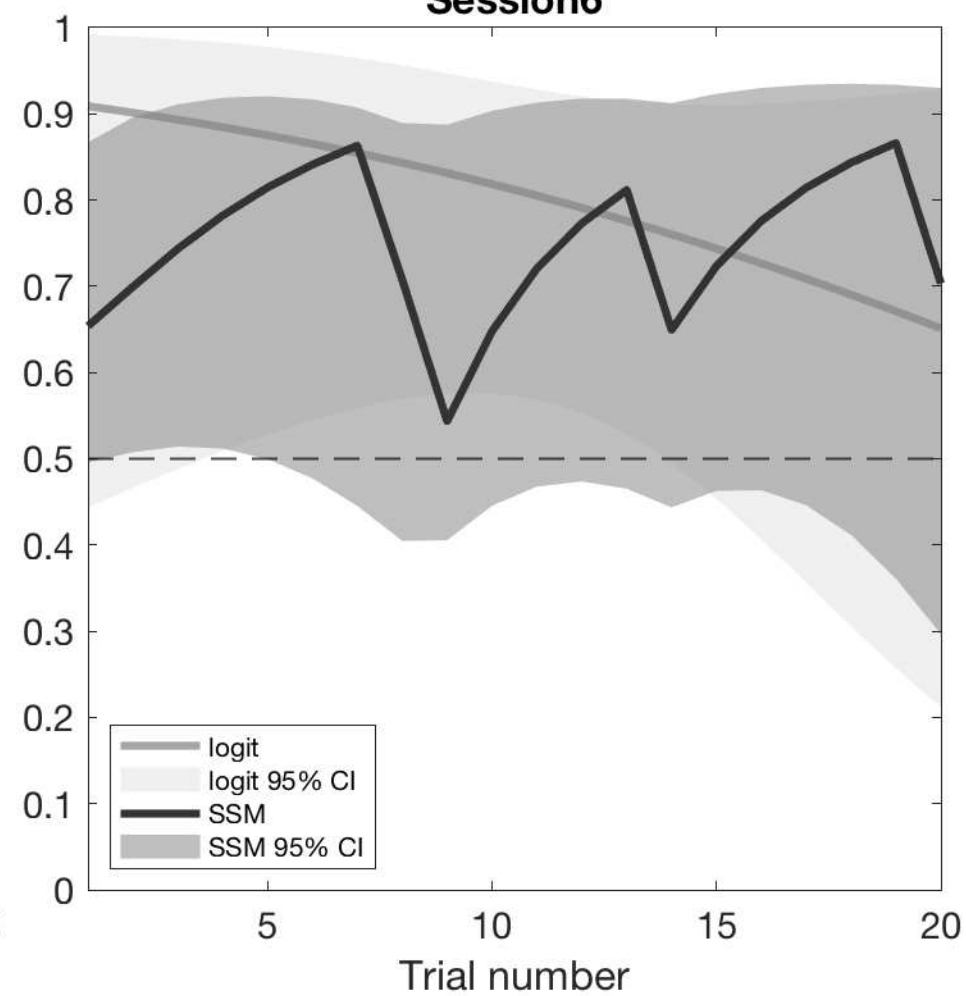
Session4



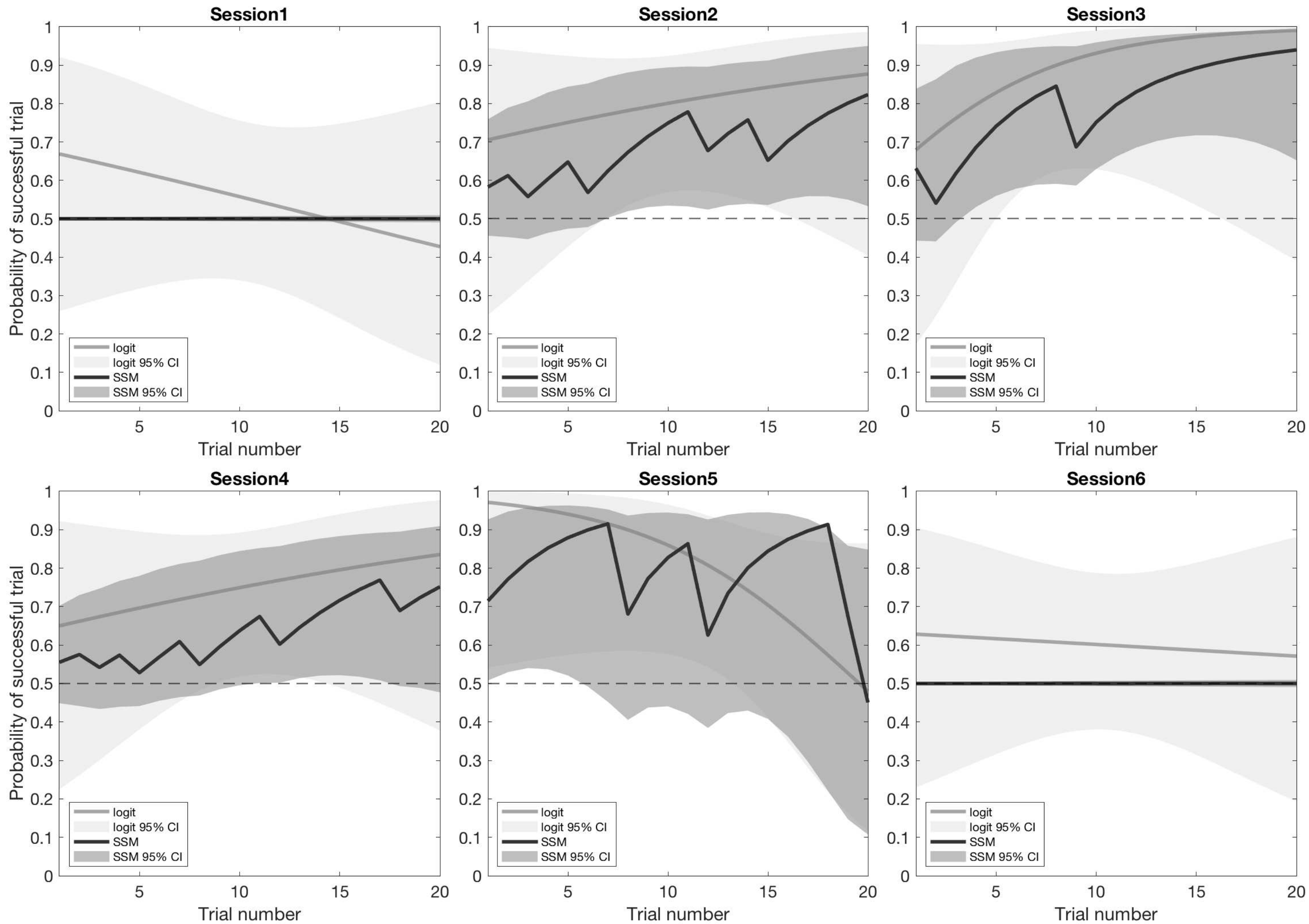
Session5



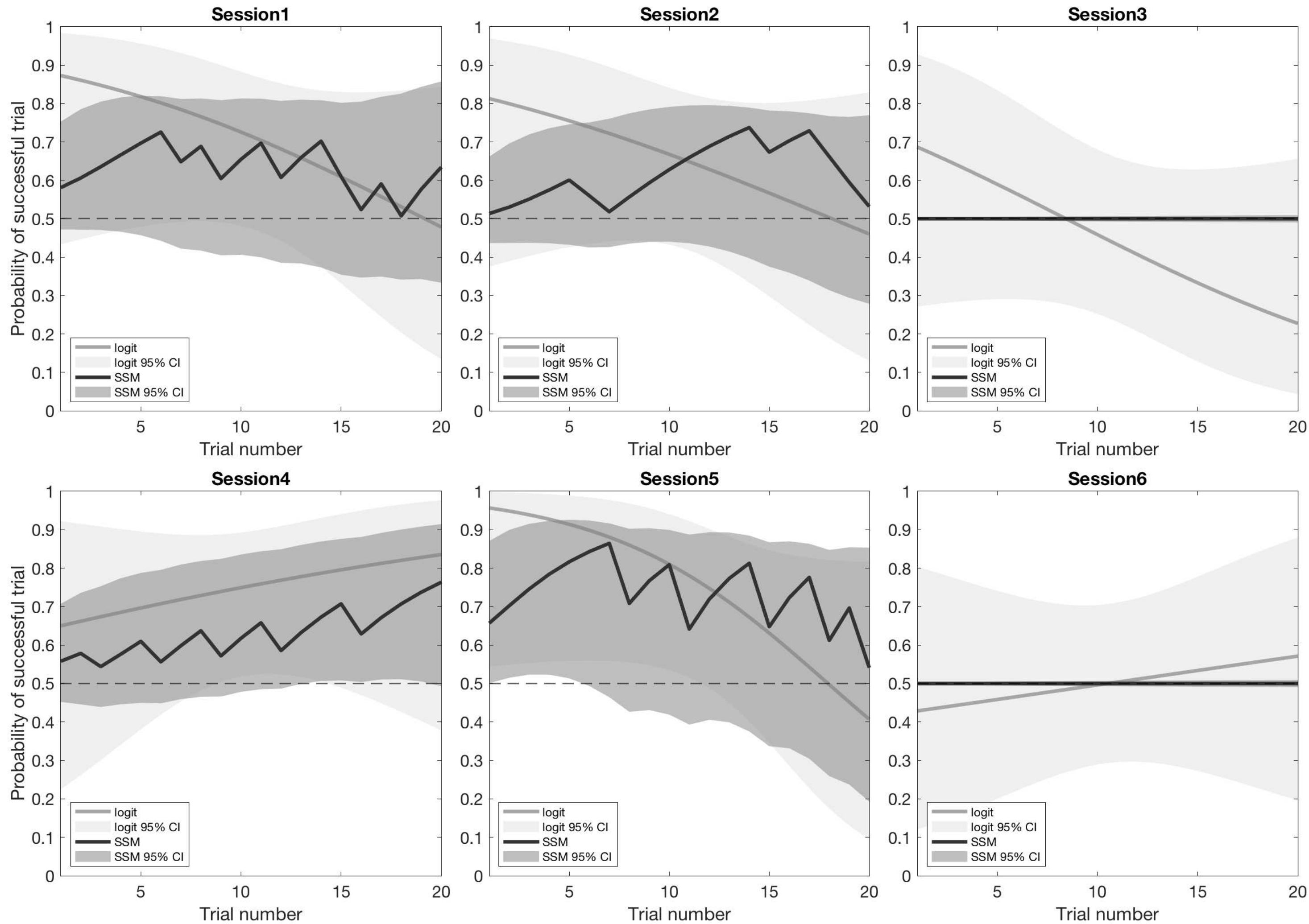
Session6



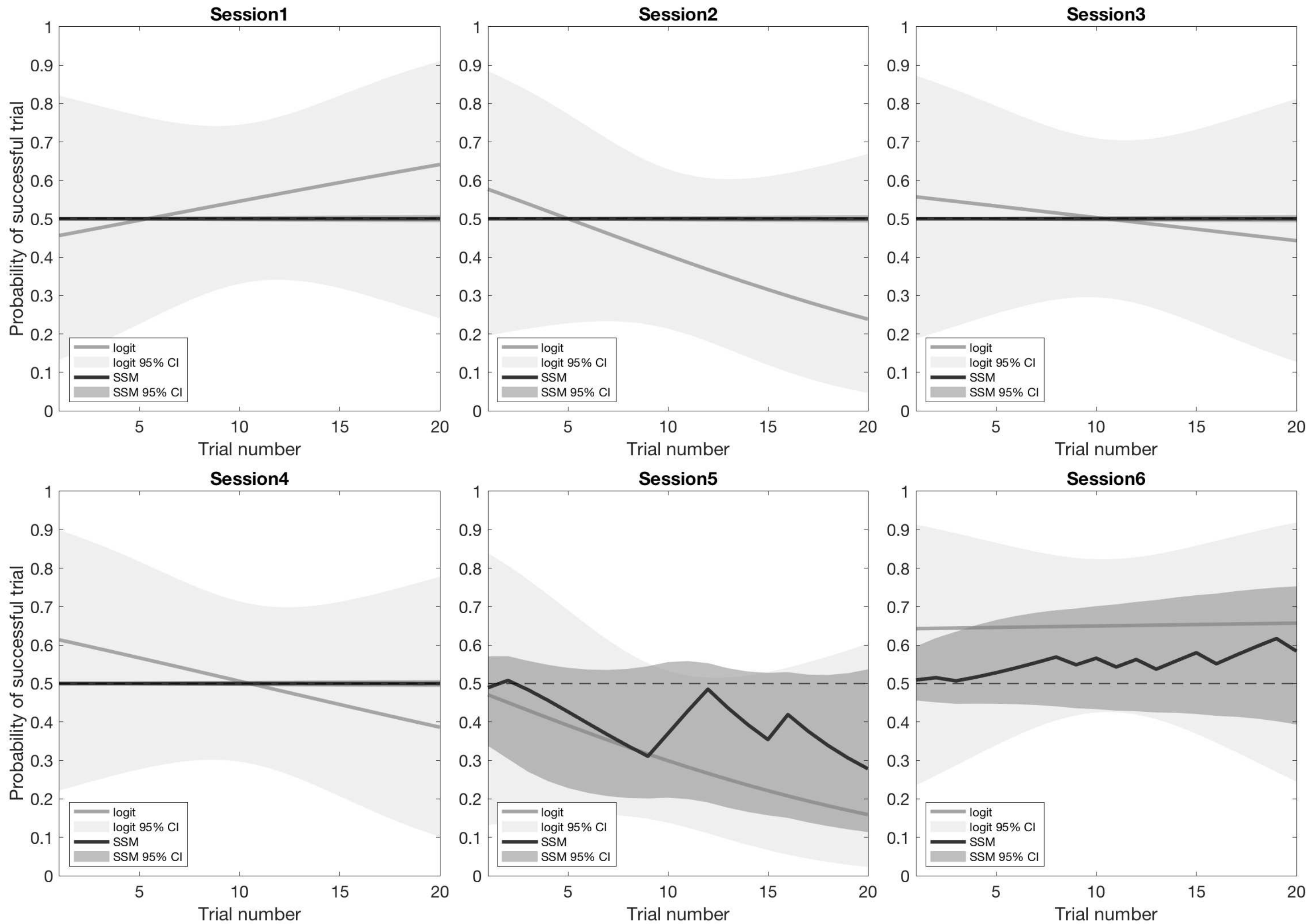
MRE-410 (V600)



MRE-412 (V600)

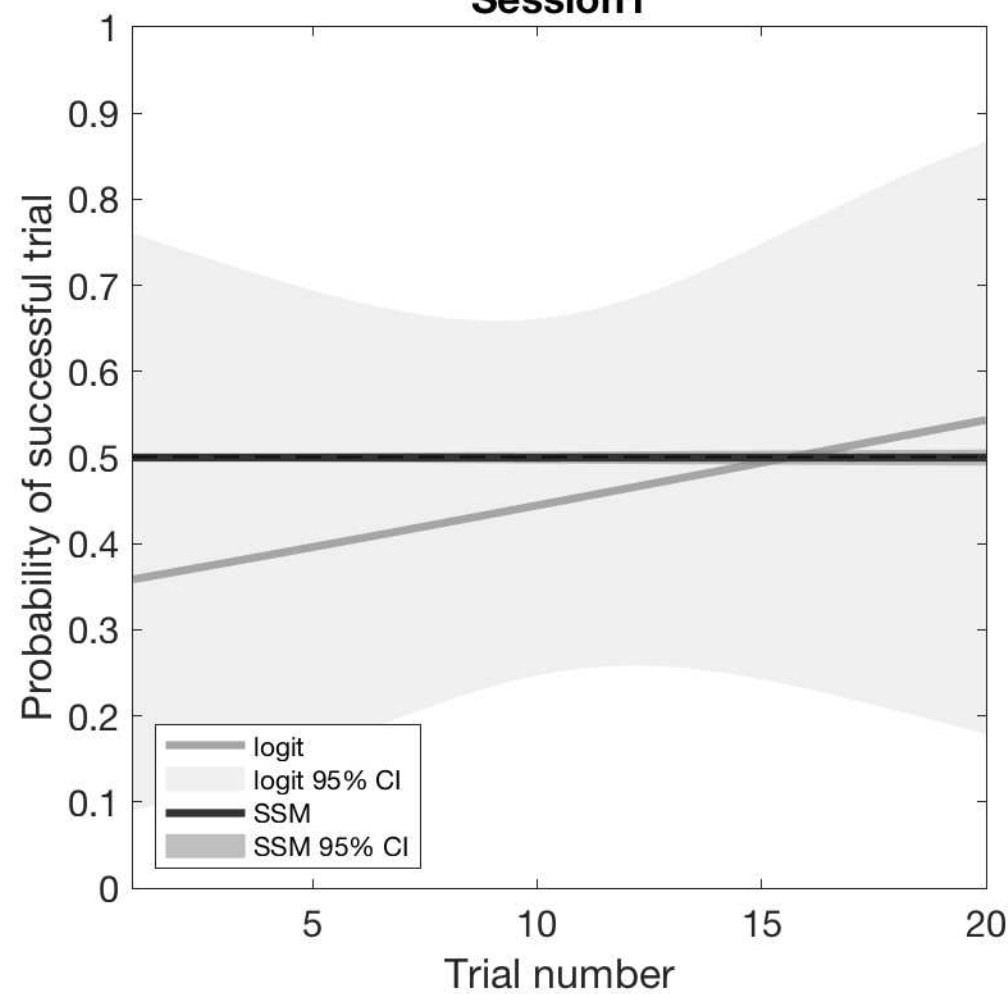


MRE-413 (V600)

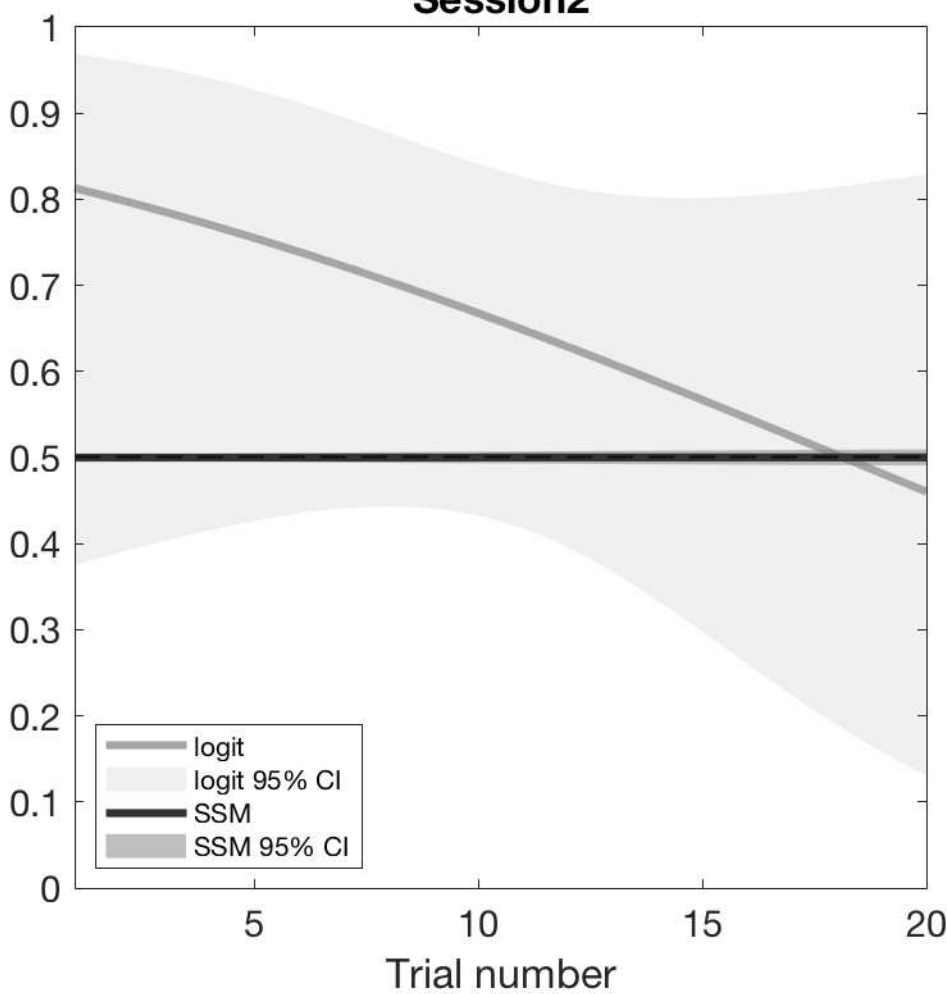


MRE-468 (V600)

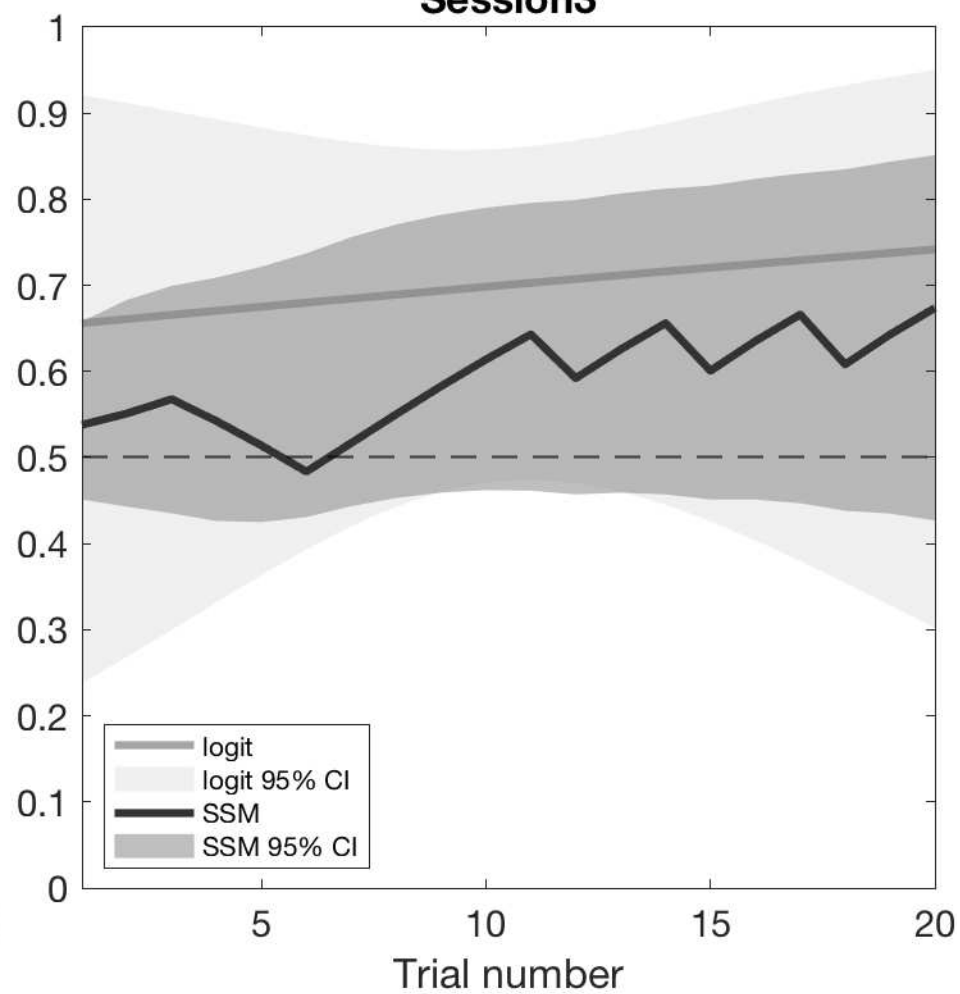
Session1



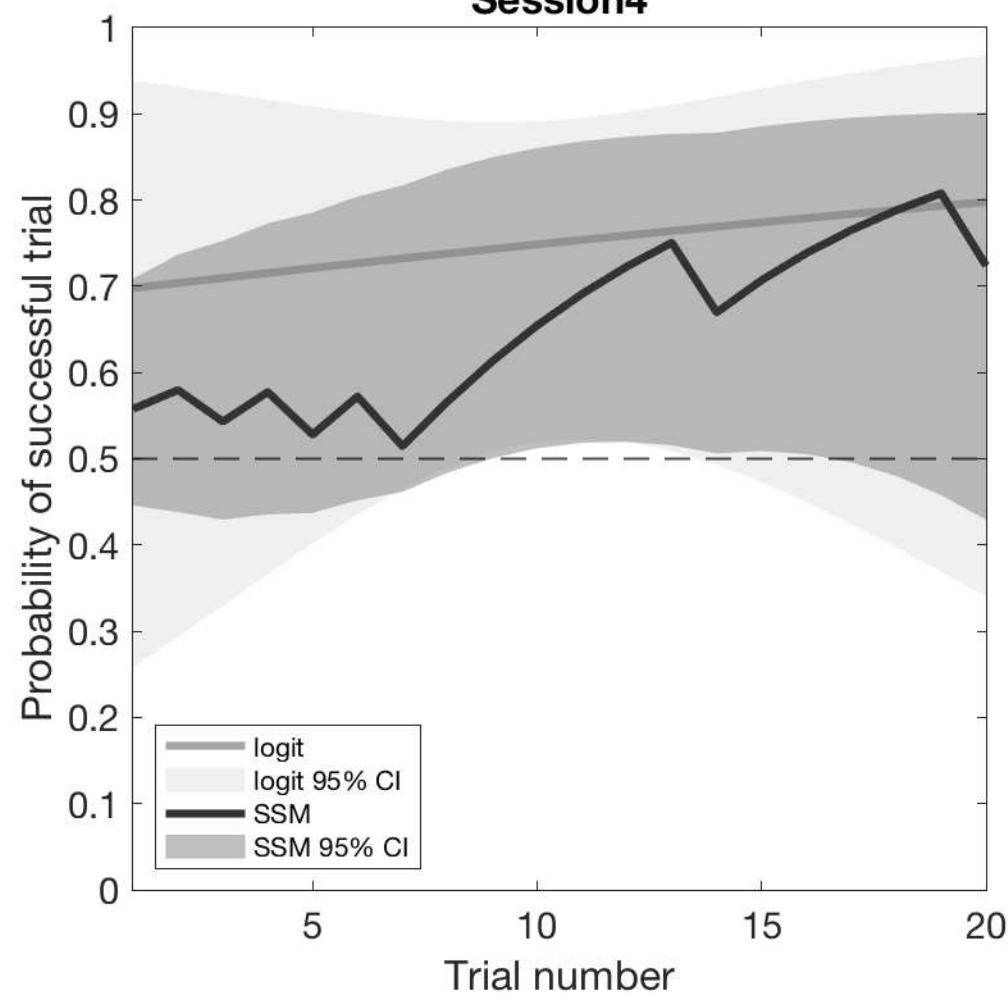
Session2



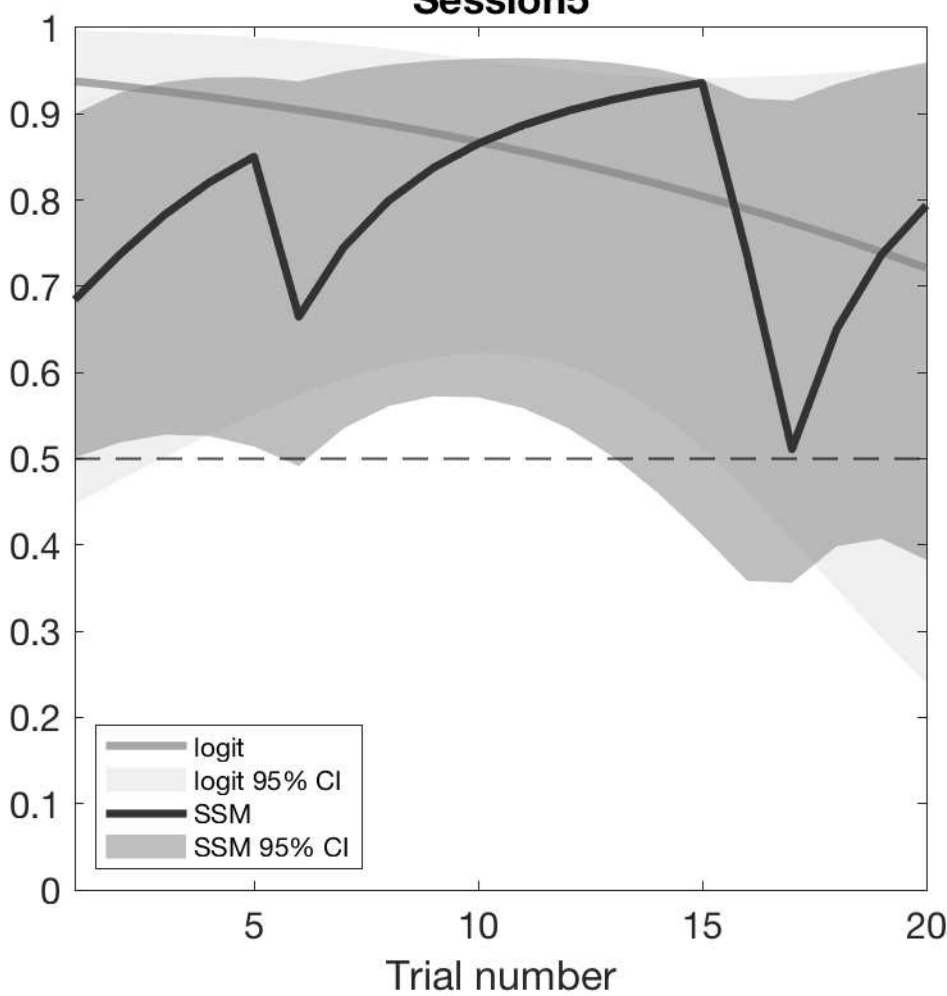
Session3



Session4



Session5



Session6

