Episodic memory and delayed recall are significantly more impaired in younger patients with deficit schizophrenia than in elderly patients with amnestic mild cognitive impairment.

Short title: deficit schizophrenia and mild cognitive impairment

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Neural Network Analysis: Deficit schizophrenia versus aMCI

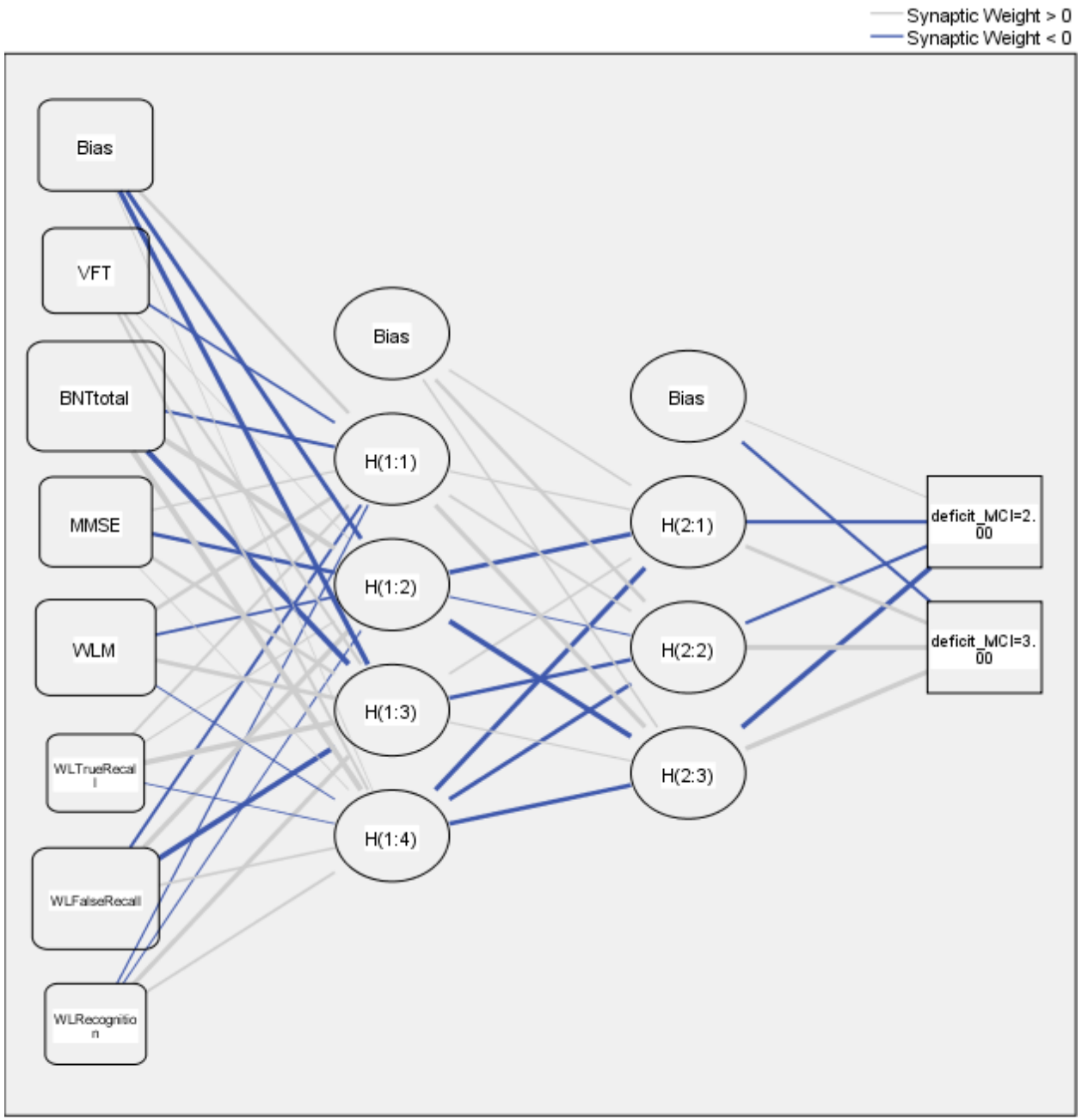
Shown are the results of Multilayer Perceptron Neural Network analysis with network information, model summary, parameter estimates, and input variable importance.

Network Information

Input Layer	Covariates	1	VFT
		2	BNTtotal
		3	MMSE
		4	WLM

		5	WL True Recall
		6	WL False Recall
		7	WLRecognition
	Number of Units[a]		7
	Rescaling Method for Covariates		Standardized
Hidden Layer(s)	Number of Hidden Layers		2
	Number of Units in Hidden Layer 1[a]		4
	Number of Units in Hidden Layer 2[a]		3
	Activation Function		Hyperbolic tangent
Output Layer	Dependent Variables	1	deficit_MCI
	Number of Units		2
	Activation Function		Softmax
	Error Function		Cross-entropy

a. Excluding the bias unit



Hidden layer activation function: Hyperbolic tangent

Output layer activation function: Softmax

Model Summary

Training	Cross Entropy Error	16.488
	Percent Incorrect Predictions	20.0%
	Stopping Rule Used	1 consecutive step(s) with no decrease in error[a]
	Training Time	0:00:00.01
Testing	Cross Entropy Error	5.288
	Percent Incorrect Predictions	13.3%
Holdout	Percent Incorrect Predictions	20.0%

Dependent Variable: deficit_MCI

a. Error computations are based on the testing sample.

Parameter Estimates

		Predicted								
		Hidden Layer 1				Hidden Layer 2			Output Layer	
Predictor		H(1:1)	H(1:2)	H(1:3)	H(1:4)	H(2:1)	H(2:2)	H(2:3)	[deficit_MCI=2.00]	[deficit_MCI=3.00]
Input Layer	(Bias)	.408	-.612	-.720	.055					
	VFT	-.256	.047	.363	.315					
	BNTtotal	-.371	1.007	-1.239	1.308					
	MMSE	.196	-.471	.431	.072					
	WLM	.436	-.298	.548	-.101					
	WLTrueRecall	.309	.163	1.105	-.074					
	WLFalseRecall	-.346	.671	-.933	.258					
	WLRecognition	-.183	-.153	.614	.286					
Hidden Layer 1	(Bias)					.219	.435	.229		
	H(1:1)					.189	.258	.646		
	H(1:2)					-.620	-.144	-.795		
	H(1:3)					.241	-.449	.176		
	H(1:4)					-.650	-.509	-.555		
Hidden Layer 2	(Bias)								.100	-.367
	H(2:1)								-.398	.440
	H(2:2)								-.378	.780
	H(2:3)								-.734	.679

Independent Variable Importance

	Importance	Normalized Importance
VFT	.092	32.3%
BNTtotal	.285	100.0%
MMSE	.130	45.7%
WLM	.177	61.9%
WL True Recall	.035	12.3%
WL False Recall	.220	77.3%
WLRecognition	.060	21.1%