

### Multimedia Appendix 3: Comparisons of Classifier Algorithms

**MA3 Table 1:** The performance of a different classifiers on MC data using Naïve Bayes (NB), Support Vector Machines (SVM) and Random Forest (RF) classifiers without local context features.

	MC data ( <b>without</b> local context features)								
	NB			SVM			RF		
Category	Pre.	Rec.	F-me.	Pre.	Rec.	F-me.	Pre.	Rec.	F-me.
<b>Medical</b>	0.61	0.60	0.60	0.65	0.65	0.65	0.74	0.73	0.73
<b>Social</b>	0.63	0.63	0.63	0.66	0.66	0.66	0.78	0.78	0.78
<b>Psychological</b>	0.58	0.59	0.59	0.61	0.61	0.61	0.73	0.72	0.71
<b>Background</b>	0.61	0.61	0.61	0.64	0.64	0.64	0.77	0.77	0.77
<b>Wellness</b>	0.63	0.63	0.63	0.68	0.68	0.68	0.76	0.75	0.75
<b>Physical</b>	0.70	0.68	0.69	0.70	0.70	0.70	0.80	0.79	0.79
<b>Previous</b>	0.53	0.53	0.53	0.56	0.56	0.56	0.61	0.61	0.61
<b>Other</b>	0.52	0.52	0.52	0.56	0.55	0.55	0.59	0.59	0.59

**MA3 Table 2:** The performance of a different classifiers on MC data using Naïve Bayes (NB), Support Vector Machines (SVM) and Random Forest (RF) classifiers with local context features.

	MC data ( <b>with</b> local context features)								
	NB			SVM			RF		
Category	Pre.	Rec.	F-me.	Pre.	Rec.	F-me.	Pre.	Rec.	F-me.
<b>Medical</b>	0.80	0.80	0.80	0.84	0.84	0.84	0.90	0.91	0.90
<b>Social</b>	0.84	0.83	0.83	0.83	0.83	0.83	0.85	0.85	0.84
<b>Psychological</b>	0.69	0.70	0.70	0.71	0.71	0.71	0.77	0.75	0.73
<b>Background</b>	0.74	0.74	0.74	0.74	0.74	0.74	0.77	0.77	0.77
<b>Wellness</b>	0.77	0.77	0.77	0.78	0.78	0.78	0.80	0.79	0.79

<b>Physical</b>	0.80	0.78	0.79	0.80	0.80	0.80	0.82	0.83	0.83
<b>Previous</b>	0.56	0.56	0.56	0.57	0.56	0.56	0.58	0.58	0.58
<b>Other</b>	0.84	0.81	0.82	0.83	0.84	0.83	0.84	0.86	0.85

**Supplement Table 3: The performance of a random forest classifier on MC using only words and bigram features, after adding topic modelling, and after adding word embedding features**

	<b>MC data</b>								
	With only word and bigram features			Adding topic modeling features			Adding word embedding features		
<b>Category</b>	<b>Pre</b>	<b>Re</b>	<b>F-m</b>	<b>Pre</b>	<b>Re</b>	<b>F-m</b>	<b>Pre</b>	<b>Re</b>	<b>F-m</b>
<b>Medical</b>	0.74	0.73	0.73	0.72	0.71	0.71	0.73	0.72	0.72
<b>Social</b>	0.78	0.78	0.78	0.74	0.74	0.74	0.77	0.79	0.77
<b>Psychological</b>	0.73	0.72	0.72	0.71	0.71	0.70	0.70	0.71	0.70
<b>Background</b>	0.77	0.77	0.77	0.73	0.73	0.73	0.75	0.75	0.75
<b>Wellness</b>	0.76	0.75	0.75	0.74	0.73	0.73	0.76	0.75	0.75
<b>Physical</b>	0.80	0.79	0.79	0.78	0.78	0.77	0.76	0.76	0.76
<b>Previous</b>	0.61	0.61	0.61	0.59	0.59	0.59	0.60	0.60	0.60
<b>Other</b>	0.59	0.59	0.59	0.57	0.57	0.57	0.59	0.59	0.59