Below is an example of OR value calculation for better understanding

The following is the procedure used to calculate the OR values. Here two newspapers Telegraph and Deccan Herald are considered.

Total set of newspaper followers (**U**): 14233874

Followers of Telegraph (**T**): 51885

Followers of Deccan Herald (**DH**): 24897

Followers following both Deccan Herald and Telegraph (**DH∩T**): 3125

P_T_DH: Probability of following Telegraph given that a follower follows Deccan Herald

Calculated as **DH∩T/DH** = 0.1255

P_DH_T: Probability of following Deccan Herald given that a follower follows Telegraph

Calculated as **DH∩T/T** = 0.0602

P_T_DH": Probability of following Telegraph given that a follower does not follow Deccan Herald

Calculated as **(T - DH∩T)/(U-DH)** = 0.0034

P_DH_T": Probability of following Deccan Herald given that a follower does not follow Telegraph

Calculated as **(DH - DH∩T)/(U-T)** = 0.0015

Odds Ratio for **T_DH = (P_T_DH * (1 - P_T_DH"))/((1 - P_T_DH) * P_T_DH")** = 41.68

Odds Ratio for **DH_T = (P_DH_T * (1 - P_DH_T"))/((1 - P_DH_T) * P_DH_T")** = 41.68

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Odds ratio for newspaper overlap

	TOI	HT	Hindu	IE	NIE	TGI	DH
TOI							
HT	0.57						
HINDU	0.44	2.59					
IE	0.79	3.71	6.21				
NIE	0.30	1.13	2.32	3.82			
TGI	0.46	1.68	3.06	6.08	10.38		
DH	0.35	1.07	1.99	3.49	16.25	41.68	

Odds ratio for newspaper - party overlap

	BJP	INC
TOI	1.260166969	0.8158859846
HT	1.482000867	2.003547629
HINDU	0.8289378694	1.091944181
IE	1.349452381	1.730471331
NIE	1.585192172	2.30696625

TGI	3.695529247	10.51235945
DH	4.466654367	9.795276041

The following is the table (T1) for Pij values, Probability of a user following newspaper i given that they follow newspaper j. Calculated as **(no. users following both i and j)/(no. Of users following j)**. This I had shared earlier.

		Newspaper I						
		TOI	**HT**	**Hindu**	**IE**	**NIE**	**TGI**	**DH**
Newspaper J	**TOI**	1.0000	0.4116	0.2962	0.1842	0.0162	0.0029	0.0012
	HT	0.7204	1.0000	0.4583	0.3032	0.0260	0.0047	0.0018
	HINDU	0.6744	0.5962	1.0000	0.3872	0.0387	0.0112	0.0026
	IE	0.7406	0.6966	0.6837	1.0000	0.0590	0.0112	0.0041
	NIE	0.5130	0.4724	0.5393	0.4659	1.0000	0.0301	0.0602
	TGI	0.6136	0.5710	0.6111	0.5897	0.2016	1.0000	0.0602
	DH	0.5472	0.4603	0.5057	0.4539	0.2850	0.1255	1.0000

The following is the table (T2) for Pij” values, Probability of a user following newspaper i given that they do not follow newspaper j. Calculated as **(no. users following i and but not j)/(no. of users not following j)**. No. of users not following j = (All users) - (Users following j) ;
No. of users following i but not j = (Users following i) - (Users following both i and j).

		Newspaper I						
		TOI	**HT**	**Hindu**	**IE**	**NIE**	**TGI**	**DH**
Newspaper J	**TOI**	0.0000	0.5492	0.4916	0.2218	0.0527	0.0063	0.0035
	HT	0.8178	0.0000	0.2464	0.1049	0.0231	0.0028	0.0017
	HINDU	0.8264	0.3634	0.0000	0.0924	0.0170	0.0021	0.0013
	IE	0.7828	0.3820	0.2582	0.0000	0.0161	0.0019	0.0012
	NIE	0.7812	0.4418	0.3352	0.1858	0.0000	0.0030	0.0013
	TGI	0.7752	0.4421	0.3392	0.1912	0.0237	0.0000	0.0015
	DH	0.7751	0.4426	0.3399	0.1922	0.0239	0.0034	0.0000

The table showing odds ratio was obtained by Tij = (T1ij/1-T1ij) / (T2ij/1-T2ij).
The following symmetric table was obtained, which I shared above.

		Newspaper I						
		TOI	**HT**	**Hindu**	**IE**	**NIE**	**TGI**	**DH**
Newspaper J	**TOI**	#DIV/0!	0.57	0.44	0.79	0.30	0.46	0.35
	HT	0.57	#DIV/0!	2.59	3.71	1.13	1.68	1.07
	HINDU	0.44	2.59	#DIV/0!	6.21	2.32	3.06	1.99
	IE	0.79	3.71	6.21	#DIV/0!	3.82	6.08	3.49
	NIE	0.30	1.13	2.32	3.82	#DIV/0!	10.38	16.25
	TGI	0.46	1.68	3.06	6.08	10.38	#DIV/0!	41.68
	DH	0.35	1.07	1.99	3.49	16.25	41.68	#DIV/0!

Similar was done for newspaper - party overlap. P_BJP_i = Probability of following BJP given that the user follows newspaper i . P_BJP_i' = Probability of following BJP given that the user does not follow newspaper i. And their odds ratio was calculated as (P_BJP_i)(1-P_BJP_i) / (P_BJP_i')(1-P_BJP_i')

Table for P_BJP_i and P_INC_i, that was shared earlier (in %).

	BJP	**INC**
TOI	23.9	10.0
HT	26.9	14.0
HINDU	29.6	16.2
IE	34.7	20.1
NIE	32.7	21.5
TGI	41.9	42.5
DH	39.9	33.7

Table or P_BJP_i' and P_INC_i'.

	BJP	**INC**
TOI	0.1993	0.1196
HT	0.1989	0.0754
HINDU	0.3363	0.1500
IE	0.2828	0.1272
NIE	0.2349	0.1062

TGI	0.1636	0.0657
DH	0.1295	0.0493

Table for odds ratio as shared above.

	BJP	INC
TOI	1.26	0.82
HT	1.48	2.00
HINDU	0.83	1.09
IE	1.35	1.73
NIE	1.59	2.31
TGI	3.70	10.51
DH	4.47	9.80