

# Can Women Break the Glass Ceiling?: An Analysis of #MeToo Hashtagged Posts on Twitter

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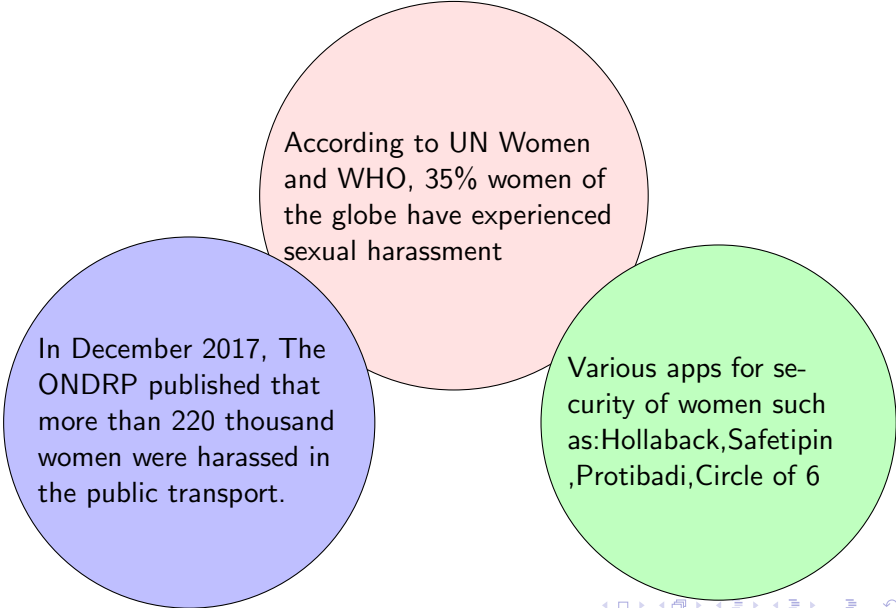
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# Previous Works

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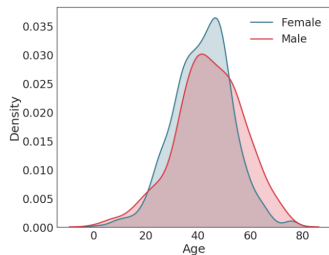
Various apps for security of women such as: Hollaback, Safetipin, Protibadi, Circle of 6

# Data Collection

City	#Tweets	Male	Female	Female(%)
Dallas	1249	144	471	76.59
Dhaka	82	32	22	40.74
Indianapolis	1203	180	452	71.52
Kansan City	448	61	208	77.32
Karachi	250	44	55	55.56
Mumbai	2778	724	674	48.21
New York	1878	267	754	73.85
North Dakota	110	18	34	65.38
Portland	849	146	316	68.4
Saint Louis	619	92	224	70.89
Tehran	114	13	32	71.11

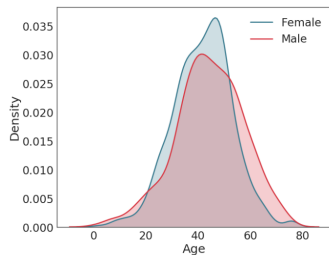
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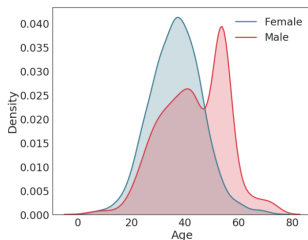


(a) US

## • Age and Gender Distribution



(a) US



(b) Asia

Figure: Age distribution of female and male users

# Harassment Claims in a Particular Form

Men used to catcall me  
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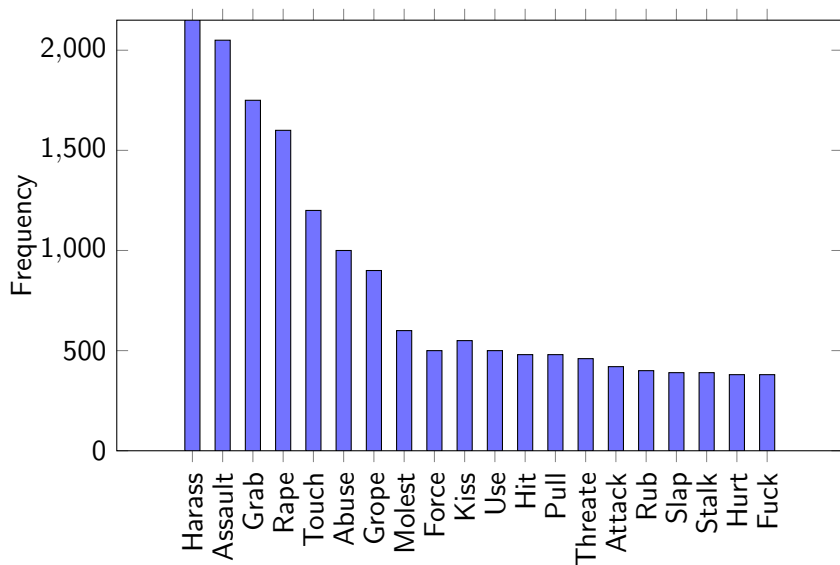
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#MeToo  
sex harassment charges  
hit Silicon Valley . Robert Scoble says, 'I feel ashamed'.

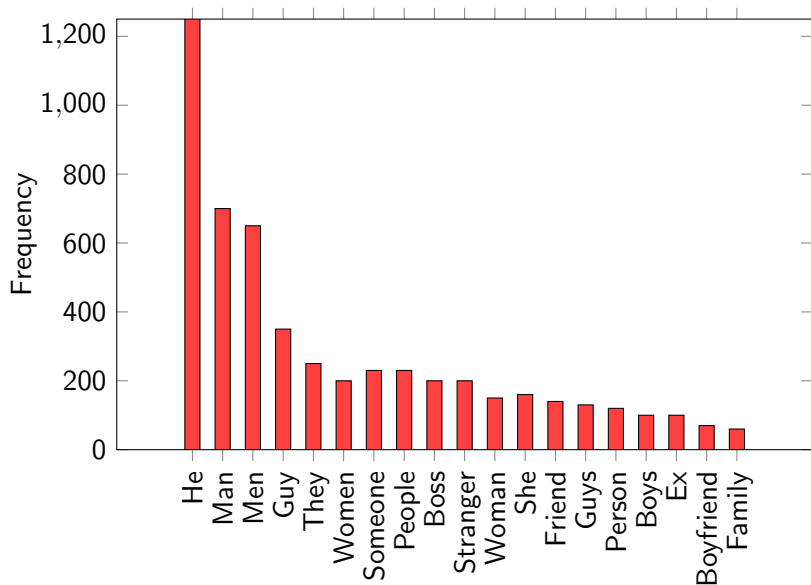
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# Frequency of different harassment categories



# Frequency of harasser roles



Relevance of a word with respect to a topic,  $r(w, k)$ , is calculated using this equation :

## Equation

$$r(w, k) = \lambda * \log(\delta_{kw}) + (1 - \lambda) * \log\left(\frac{\delta_{kw}}{P_w}\right)$$

Here ,  $\delta_{kw}$  denotes the probability of word  $w$  for topic  $k$ ,  $P_w$  denotes the marginal probability of term  $w$  in the whole dataset, and  $\lambda$  is a tuning parameter

# Frequency distribution of harassment category - harasser role pairs

Category	Boss	Boy	Boyfriend	Boys	Brother	Classmate	Cousin	Coworker	Dad	Director	Doctor	Dude	Everyone	Ex	Family Friend	Family Member	Father	Friend	Friends	Girl	Guy	Guy	He	Man	Manager	Men	Neighbor	People	Person	She	Someone	Stranger	Strangers	Teacher	Team Doctor	They	Trump	Uncle	Woman	Women	
Abuse	1	2	10	1	6	1	7	1	8	2	2	0	2	11	2	16	16	1	3	3	5	2	44	34	1	73	2	21	11	2	16	1	0	4	12	26	3	9	15	29	
Assault	12	10	10	11	3	3	1	3	1	48	2	2	16	15	9	15	4	30	7	7	39	14	89	91	5	125	4	57	40	12	37	10	2	4	0	34	9	4	25	63	
Attack	1	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	1	2	0	3	0	14	5	0	14	0	7	2	3	1	3	0	0	0	0	4	1	1	4	11	
Force	3	7	6	2	0	2	0	1	0	0	0	1	0	9	1	0	1	6	0	1	16	3	101	21	0	9	1	0	0	10	5	5	0	0	0	16	0	2	2	0	
Fuck	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	1	2	0	11	2	0	4	0	4	1	6	4	1	0	0	0	7	0	0	1	0	
Grab	26	38	1	10	1	5	3	7	5	0	2	10	0	0	2	0	0	9	4	15	107	23	178	157	7	45	4	8	3	9	41	46	13	1	0	14	7	5	21	24	
Grope	10	7	2	12	1	5	1	2	0	1	3	1	0	1	2	2	0	8	1	6	39	6	59	55	2	29	2	5	2	4	14	37	17	1	0	8	0	1	8	9	
Harass	44	8	1	17	1	7	1	6	0	5	2	6	2	0	2	2	4	4	9	4	43	20	62	76	19	206	4	28	11	5	34	3	5	8	0	53	2	1	14	51	
Hit	2	7	0	1	1	0	0	1	0	0	0	0	0	3	0	0	0	0	0	3	6	1	35	11	0	8	0	0	0	2	3	0	0	0	0	14	0	0	2	8	
Hurt	0	0	1	0	1	1	0	0	0	0	0	1	2	1	0	0	0	0	1	0	1	0	27	2	0	10	0	11	2	1	5	0	0	0	14	0	0	0	5		
Kiss	11	11	1	4	1	1	1	2	1	0	0	4	0	0	1	0	0	4	2	2	16	2	84	10	1	8	5	0	1	7	5	4	4	1	0	2	0	0	1	3	
Molest	1	8	1	2	9	0	8	0	7	0	11	0	1	1	7	16	5	1	2	0	3	1	25	20	0	8	8	3	2	2	4	2	0	1	50	2	0	16	6	3	
Pull	1	6	0	6	0	2	0	0	0	1	1	0	0	0	0	0	0	4	1	0	15	3	62	22	0	7	1	1	0	5	2	1	0	0	5	0	0	3	1		
Rape	10	3	22	3	5	1	14	2	3	1	2	2	1	24	3	7	12	24	7	5	29	2	164	54	0	62	7	9	8	9	16	7	1	4	0	26	1	7	16	25	
Rub	9	2	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	5	1	21	28	0	10	0	0	0	5	2	4	0	2	0	0	0	1	1	2	
Slap	3	7	0	1	0	1	0	2	0	0	0	0	1	0	1	0	0	0	3	0	0	7	0	16	7	0	5	0	0	0	6	1	2	1	0	0	3	0	0	1	2
Stalk	0	2	0	0	0	2	0	2	0	0	0	0	0	6	1	0	0	0	0	0	7	1	25	11	0	5	0	1	0	3	3	1	0	0	0	1	0	1	0	1	2
Threat	1	5	3	1	0	0	0	0	0	0	0	1	0	0	4	0	0	0	3	0	0	10	1	61	9	2	8	0	1	3	5	4	0	0	0	0	7	1	0	3	1
Touch	11	24	2	6	0	2	9	5	2	0	4	8	1	1	4	4	0	11	3	5	44	17	154	87	2	52	0	13	7	13	40	9	9	5	0	35	0	5	7	8	
Use	0	0	0	0	2	0	2	0	0	0	0	0	0	5	0	1	0	1	1	5	5	2	0	46	5	0	13	1	15	3	21	2	0	0	0	11	2	1	4	34	