





Author	Publication Year	Teamwork within Units				Supervisor Promotes Patient Safety				Organisational Learning				Management Support for Patient Safety				Overall Perception of Patient Safety				
		Pre	post	Mean difference	Significance	Pre	post	Mean difference	Significance	Pre	post	Mean difference	Significance	Pre	post	Mean difference	Significance	Pre	post	Mean difference	Significance	Pre
Abtoss	2011	***Original***																				
AbuARub	2014	79.9	83.8	3.9	0.462	51.8	56.5	4.7	0.828	83.5	84.8	1.3	1	72.7	70.3	-2.4	1	51.5	60.6	9	0.746	76.6
Amiri	2018	2.91	3.95	NA	<0.001	3.48	4.22	NA	<0.001	3.83	4.45	NA	<0.001	3.15	3.26	NA	0.5	2.92	3.08	NA	0.1	3.25
Ansari	2020	***Original***																				
Basson	2021	72	83	NA	0.04	70	72	NA	0.72	75	70	NA	0.4	NA	NA	NA	NA	76	69	NA	0.19	61
Benn	2012	***Original***																				
Berry	2020	***graph***																				
Bleazen	2009	3.83	3.95	NA	0.024	3.41	3.76	NA	0	3.53	3.81	NA	0	3.51	3.81	NA	0	3.02	3.29	NA	0	3.32
Chera	2014	***graph***																				
DeKorne	2014	***Qualitative***																				
Dickens	2021	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Edwards	2008	3.98	4.14	NA	0.008	3.6	3.85	NA	<0.001	3.77	3.88	NA	0.011					3.45	3.45	NA	NA	3.42
Frankel	2008	***Chart & original*** different scales, see notes,																				
Ginsburg	2005																					
Gupta	2015	***Original***																				
Habahbeh	2020	***Original***																				
Hefner	2016	***Chart***																				
Hinde	2016	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jones, F.	2013	69%	90%		0.0871	49%	67%		0.4033	52%	78%		0.0391	52%	76%		0.0238	45%	72%		0.0676	53%
-	-	60%	61%		0.8071	69%	74%		0.9582	64%	64%		0.9953	62%	71%		0.0588	55%	58%		0.8569	68%
Jones, K.	2013	***Original***																				
Kuusmannen	2019	3.68	3.88	0.2	<0.01	3.72	4	0.28	<0.001	3.34	3.52	0.18	<0.01	2.76	3.11	0.35	<0.001	3.22	3.38	0.16	<0.05	3.42
Kristensen	2016	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kuy	2017	***graph***																				
Ling	2016	61.9	78.3	NA	0.008	55.4	65.2	NA	0.13	55	63.8	NA	0.24	40.7	69.6	NA	<0.001	28.3	40.2	NA	0.06	36
Lopez-Jeng	2020	87.06	92.45	5.36	0.0784	NA	NA	NA	NA	74.24	75.63	1.39	0.7765	70.51	82.5	11.99	0.0142	65.05	77.85	12.8	0.0045	58.15
Lozito	2018	***Graph***																				
Mazur	2015	NA	NA	NA	NA	NA	NA	NA	NA	82	96	NA	NA	NA	NA	NA	NA	71	92	NA	NA	NA
Milton	2020	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Paine	2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Patterson	2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Profit	2014	***chart***																				
Pronovost	2008	***Research result***																				
Razzani	2020	72.73	83.33	NA	<0.000	46.67	58.18	NA	<0.000	65.66	78.79	NA	<0.000	58.18	70.1	NA	<0.000	58.03	68.48	NA	<0.000	60.4
Ressel	2019	***Chart***																				
Sexton	2011	***Original***																				
Slater	2012	*** Interview quote and original chart*** outcome, both for SAQ and systems thinking																				
Tetuan	2017																					
Timmell	2010	***Original***																				
Vigorito	2011	***See results***																				
Watts	2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Yuce	2020	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zhu	2020	***chart***																				

Author	Publication		QUESTION		
	Year	Feedback and Communication about Error	Feedback and Communication about Error		
			post	Mean difference	Significance
Abtoss	2011				
AbuAlRub	2014	75	-1.6	0.961	
Amiri	2018	3.56	NA	0.1	
Ansari	2020				
Basson	2021	58	NA	0.68	
Benn	2012				
Berry	2020				
Bleazen	2009	3.51	NA	0	
Chera	2014				
DeKorne	2014				
Dickens	2021	NA	NA	NA	
Edwards	2008	3.69	NA	0.002	
Frankel	2008				
Ginsburg	2005				
Gupta	2015				
Habahbeh	2020				
Hefner	2016				
Hinde	2016	NA	NA	NA	
Jones, F.	2013	87%		0.0021	
-	-	60%		0.1118	
Jones, K.	2013				
Kuusimannen	2019	3.75	0.33	<0.001	
Kristensen	2016	NA	NA	NA	
Kuy	2017				
Ling	2016	49.3	NA	0.08	
Lopez-Jena	2020	64.91	6.76	0.2284	
Lozito	2018				
Mazur	2015	NA	NA	NA	
Milton	2020	NA	NA	NA	
Paine	2010	NA	NA	NA	
Patterson	2012	NA	NA	NA	
Profit	2014				
Pronovost	2008				
Razzani	2020	75.76	NA	<0.000	
Reszel	2019				
Sexton	2011				
Slater	2012				
Tetuan	2017				
Timmell	2010				
Vigorito	2011				
Watts	2010	NA	NA	NA	
Yuce	2020	NA	NA	NA	
Zhu	2020				

4.1: Hospital Survey on Patient Safety and Safety Culture																				
Publication Year	Communication Openness				Frequency of Events Reported				Teamwork Across Units				Staffing				Handoffs and Transitions			
	Pre	post	Mean difference	Significance	Pre	post	Mean difference	Significance	Pre	post	Mean difference	Significance	Pre	post	Mean difference	Significance	Pre	post	Mean difference	
Abtoss	2011																			
AbuARub	2014	57.8	60.3	2.5	0.502	54.2	64.3	10	0.043	54.5	57.3	2.8	1	28.2	32.9	4.7	0.3119	39.3	33.5	-5.8
Amiri	2018	2.72	4.22	NA	<0.001	2.91	2.76	NA	0.4	2.94	3.06	NA	0.5	1.84	1.97	NA	0.3	2.75	4.23	NA
Ansari	2020																			
Basson	2021	67	72	NA	0.35	67	56	NA	0.11	59	61	NA	0.75	NA	NA	NA	NA	NA	NA	NA
Benn	2012																			
Berry	2020																			
Bleazen	2009	3.44	3.63	NA	0.002	3.33	3.25	NA	0.145	3.36	3.51	NA	0.013	NA	NA	NA	NA	2.71	2.93	NA
Chera	2014																			
DeKorne	2014																			
Dickens	2021	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Edwards	2008	3.59	3.64	NA	NA	3.47	3.62	NA	0.008	3.98	4.14	NA	0.001	3.47	3.47	NA	NA	3.29	3.09	NA
Frankel	2008																			
Ginsburg	2005																			
Gupta	2015																			
Habahbeh	2020																			
Hefner	2016																			
Hinde	2016	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jones, F.	2013	51%	67%		0.0425	55%	58%		0.3697	28%	37%		0.027	46%	63%		0.1112	42%	57%	
-	-	53%	53%		0.5268	65%	67%		0.4772	58%	54%		0.9814	42%	60%		0.0317	44%	54%	
Jones, K.	2013																			
Kuusmannen	2019	3.27	3.75	0.14	<0.05	3.96	3.87	0.07	NA	3.68	3.64	0.04	<0.05	3.32	3.43	0.11	NA	2.99	3.19	0.2
Kristensen	2016	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kuy	2017																			
Ling	2016	30.6	30.4	NA	0.98	39.8	19.7	NA	0.006	47.2	42.4	NA	0.47	28.6	35.6	NA	0.26	49	46.7	NA
Lopez-Jeng	2020	60.09	68.1	8.01	0.1445	52.78	46.85	-5.93	0.3097	65.91	77.5	11.59	0.0095	55.63	61.25	5.62	0.2423	43.91	56.88	12.97
Lozito	2018																			
Mazur	2015	77	80	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Milton	2020	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Paine	2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Patterson	2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Proffit	2014																			
Pronovost	2008																			
Razzani	2020	49.49	63.03	NA	<0.000	53.94	71.11	NA	<0.000	58.33	64.24	NA	<0.000	NA	NA	NA	NA	NA	NA	NA
Reszel	2019																			
Sexton	2011																			
Slater	2012																			
Tetuan	2017																			
Timmell	2010																			
Vigorito	2011																			
Watts	2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Yuce	2020	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zhu	2020																			

Author	Publication		Nongunitive Response to Error			
	Year	Significance	Pre	post	Mean difference	Significance
Abtoss	2011					
AbuARub	2014	0.085	16.9	26.2	9.3	0.041
Amiri	2018	<0.001	2.25	2.78	NA	0.02
Ansari	2020					
Basson	2021	NA	63	70	NA	0.23
Benn	2012					
Berry	2020					
Bleazen	2009	0.007	2.86	3.15	NA	0
Chera	2014					
DeKorne	2014					
Dickens	2021	NA	NA	NA	NA	NA
Edwards	2008	<0.001	3.09	3.24	NA	0.015
Frankel	2008					
Ginsburg	2005					
Gupta	2015					
Habahbeh	2020					
Hefner	2016					
Hinde	2016	NA	NA	NA	NA	NA
Jones, F.	2013	0.1375	27%	36%		0.2335
-	-	0.0887	32%	25%		0.6292
Jones, K.	2013					
Kuusimannen	2019	<0.01	2.52	2.73	0.21	<0.05
Kristensen	2016	NA	NA	NA	NA	NA
Kuy	2017					
Ling	2016	0.74	17.1	14.5	NA	0.64
Lopez-Jeng	2020	0.0076	40.6	50.83	10.23	0.663
Lozito	2018					
Mazur	2015	NA	NA	NA	NA	NA
Milton	2020	NA	NA	NA	NA	NA
Paine	2010	NA	NA	NA	NA	NA
Patterson	2012	NA	NA	NA	NA	NA
Proffit	2014					
Pronovost	2008					
Razzani	2020	NA	40.15	49.55	NA	<0.000
Reszel	2019					
Sexton	2011					
Slater	2012					
Tetuan	2017					
Timmell	2010					
Vigorito	2011					
Watts	2010	NA	NA	NA	NA	NA
Yuce	2020	NA	NA	NA	NA	NA
Zhu	2020					

Author	Publication Year	QUESTION 1: Safety Attitudes Questionnaire																		
		Teamwork Climate				Job Satisfaction				Perceptions of Management				Safety Climate				Working Conditions		
		Pre	post	Mean difference	Significance	Pre	post	Mean difference	Significance	Pre	post	Mean difference	Significance	Pre	post	Mean difference	Significance	Pre	post	Mean difference
Abtoss	2011																			
AbuARub	2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Amiri	2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ansari	2020																			
Basson	2021	NA	NA	NA	NA	85	85	NA	0.97	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benn	2012																			
Berry	2020																			
Bleazen	2009	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chera	2014																			
DeKorne	2014																			
Dickens	2021	3.78	3.74	NA	0.96	3.3	3.19	NA	0.18	3.81 (unit), 3.12 (hospital)	3.78 (unit), 3.00 (hospital)	NA	0.87 (unit), 0.27 (hospital)	3.85	3.89	NA	0.62	3.33	3.23	NA
Edwards	2008																			
Frankel	2008																			
Ginsburg	2005																			
Gupta	2015																			
Hababbeh	2020																			
Hefner	2016																			
Hinde	2016	73.6	78.9	NA	0.013	NA	NA	NA	NA	NA	NA	NA	NA	65.8	73.9	NA	0.604	NA	NA	NA
Jones, F.	2013																			
-	-																			
Jones, K.	2013																			
Kuusmannen	2019																			
Kristensen	2016	74.7	77.6	3.1	<0.01	75.7	82.2	5.4	<0.01	70.4 (unit), 62.3 (Department)	76.5 (unit), 65.4 (Department)	5.3 (unit), 2.7 (Department)	<0.01 (unit), <0.05 (department)	68	72.1	3.1	<0.01	69.8	72.7	3.4
Kuy	2017																			
Ling	2016																			
Lopez-Jeng	2020																			
Lozito	2018																			
Mazur	2015	NA																		
Milton	2020	68.8	69.8	NA	0.634	70.4	70.5	NA	0.949	49.9	52.5	NA	0.275	58.3	62.1	NA	0.078	57.8	55.1	NA
Paine	2010	64.74	70.64	5.9	0	60.8	66.49	5.6	0	39.25	46.61	7.36	0	61.01	69.37	8.36	0	48.01	54.93	6.92
Patterson	2012	73.2	78.6	NA	<0.001	NA	NA	NA	NA	NA	NA	NA	NA	69.2	73.1	NA	<0.001	NA	NA	NA
Profit	2014																			
Pronovost	2008																			
Razzani	2020	NA																		
Reszel	2019																			
Sexton	2011																			
Slater	2012																			
Tetuan	2017																			
Timmell	2010																			
Vigorito	2011																			
Watts	2010	65.84	72.09	NA	<0.001	72.09	73.46	NA	<0.05	56.09	63.72	NA	<0.001	67.4	72.94	NA	<0.001	60.06	64.31	NA
Yuce	2020	80.7	84.6	3.90%	0.03	NA	NA	NA	NA	74.9	77.6	2.70%	0.2	80.9	84.1	3.20%	0.03	80.3	81.2	0.90%
Zhu	2020																			

Publication		Stress Recognition					OTHER
Author	Year	Significance	Pre	post	Mean difference	Significance	
Abtoss	2011						
AbuARub	2014	NA	NA	NA	NA	NA	
Amiri	2018	NA	NA	NA	NA	NA	
Ansari	2020						
Basson	2021	NA	NA	NA	NA	NA	
Benn	2012						safety climate and capability (SCC) score
Berry	2020						
Bleazen	2009	NA	NA	NA	NA	NA	hospitals as the authors reported that
Chera	2014						
DeKorne	2014						methods used observations pre- and the relevant results, the OCAI is not
Dickens	2021	0.28	3.86	3.95	NA	0.3	
Edwards	2008						
Frankel	2008						relevant tools used: Singer, S. J., D. M.
Ginsburg	2005						
Gupta	2015						
Habahbeh	2020						
Hefner	2016						
Hinde	2016	NA	NA	NA	NA	NA	
Jones, F.	2013						
-	-						
Jones, K.	2013						on % of positive response and mean
Kuusimann	2019						
Kristensen	2016	<0.05	70	70.3	0.6	NA	Questionnaire. Original results in text, because that was the intervention hospital. difference, but is the difference between
Kuy	2017						
Ling	2016						
Lopez-Jeng	2020						
Lozito	2018						measure too, 3 time points in total but only
Mazur	2015						
Milton	2020	0.258	66.4	72.5	NA	0.016	
Paine	2010	0	45.36	45.84	0.48	0.67	
Patterson	2012	NA	NA	NA	NA	NA	
Proffit	2014						in CHart form for the SAQ and the HSDPS,
Pronovost	2008						
Razzani	2020						time points: before, after and a follow up. one, complicated to extract but interesting.
Reszel	2019						
Sexton	2011						
Slater	2012						
Tetuan	2017						
Timmell	2010						
Vigorito	2011						
Watts	2010	<0.001	68.22	69.74	NA	<0.05	
Yuce	2020	0.68	NA	NA	NA	NA	
Zhu	2020						organised thematically alongside comparable