

Additional tables from the ORMAQ (Operating Room Management Attitudes Questionnaire) study conducted as part of the NOTSS: Non-technical Skills for Surgeons project and published as:

Flin R, Yule S, McKenzie L, Paterson-Brown S, Maran N. Attitudes to teamwork and safety in the operating theatre. *The Surgeon* 2006, 4:3; 145-151

See also www.abdn.ac.uk/iprc/notss

Steven Yule, June 2006

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Table A. Consultant and Trainee Surgeons' and Nurses' attitudes to leadership, stress, teamwork, work values, error and organizational climate. Original item numbers are shown to indicate the order they were set in the questionnaire. * indicates significant differences between the three groups.

	CONSULTANT SURGEONS			TRAINEE SURGEONS			NURSES		
	% Dis	% N	% Ag	% Dis	% N	% Ag	% Dis	% N	% Ag
Leadership Structure									
3. Senior staff should encourage questions from junior medical and nursing staff during operations if appropriate	3	5	92	0	3	97	3	3	94
10. Doctors who encourage suggestions from Operating Theatre team members are weak leaders	91	3	6	89	7	4	97	3	1
27. Successful Operating Theatre management is primarily a function of the doctor's medical and technical proficiency	65	16	19	57	23	20	72	15	14
42. Leadership of the Operating Theatre team should rest with the medical staff*	15	26	59	27	22	52	86	7	7
50. There are no circumstances where a junior team member should assume control of patient management*	78	11	11	77	11	12	54	15	31
Confidence-Assertion									
1. The senior person, if available, should take over and make all decisions in life threatening emergencies*	15	4	81	18	1	81	21	17	62
14. Junior Operating Theatre team members should not question the decisions made by senior personnel	90	7	4	77	11	12	84	8	8

32. If I perceive a problem with the management of a patient, I will speak up, regardless of who might be affected	7	7	87	5	19	75	2	6	92
34. In critical situations, I rely on my superiors to tell me what to do*	61	30	9	37	17	46	67	9	24
36. I sometimes feel uncomfortable telling Operating Theatre members from other disciplines that they need to take some action	41	17	42	22	20	59	31	21	49
38. Team members should not question the decisions or actions of senior staff except when they threaten the safety of the operation	67	19	15	58	17	25	73	9	18
60. I always ask questions when I feel there is something I don't understand*	5	16	79	8	7	86	5	3	92
Information Sharing									
12. A regular debriefing of procedures and decisions after an Operating Theatre session or shift is an important part of developing and maintaining effective team co-ordination*	17	38	44	5	23	72	7	15	78
13. Team members in charge should verbalise plans for procedures or actions and should be sure that the information is understood and acknowledged by others*	1	13	86	1	2	97	2	0	98
16. I am encouraged by my leaders and co-workers to report any incidents I may observe*	18	41	41	23	33	44	16	14	70
19. The pre-session team briefing is important for safety and for effective team management*	16	47	37	7	42	51	7	14	79
Stress and Fatigue									
4. Even when tired, I perform effectively during critical phases of operations	32	18	50	38	10	53	27	10	63
5. We should be aware of, and sensitive to, the personal problems of other team members*	9	19	73	9	15	76	6	8	86

8. I let other team members know when my workload is becoming (or is about to become) excessive*	36	23	41	34	23	43	21	10	69
11. My decision making is as good in emergencies as it is in routine situations	21	17	62	15	18	67	12	13	75
21. I am more likely to make errors in tense or hostile situations	15	16	69	8	7	86	18	14	68
39. I am less effective when stressed or tired	8	12	80	14	8	78	14	14	73
43. My performance is not adversely affected by working with an inexperienced or less capable team member*	56	13	30	45	14	41	31	14	55
45. Team members should monitor each other for signs of stress or tiredness*	19	26	55	13	24	63	10	12	78
46. I become irritated when I have to work with inexperienced medical staff	37	24	39	59	22	19	41	26	33
49. A truly professional team member can leave personal problems behind when working in the Operating Theatre	22	13	65	11	12	77	25	17	58
51. Team members should feel obligated to mention their own psychological stress or physical problems to other Operating Theatre personnel before or during a shift or assignment*	52	29	19	54	31	15	45	17	38
55. Personal problems can adversely affect my performance	18	26	56	34	20	47	31	15	53
Team Work									
17. The only people qualified to give me feedback are members of my own profession	80	10	9	71	12	17	79	6	15
18. It is better to agree with other Operating theatre team members than to voice a different opinion	85	7	8	75	10	15	88	6	6
22. The doctor's responsibilities include co-ordination between his or her work team and other support teams	1	1	98	1	3	96	5	5	90
25. Operating Theatre team members share responsibilities for prioritising activities in high workload situations	18	13	69	14	9	77	22	9	69

31. I enjoy working as part of a team	3	5	92	0	2	98	2	7	92
44. To resolve conflicts, team members should openly discuss their differences with each other*	6	13	81	8	18	74	5	7	88
48. All members of the Operating Theatre team are qualified to give me feedback*	13	12	75	24	13	63	12	15	73
54. The concept of all Operating theatre personnel working as a team does not work at this hospital*	70	17	13	66	22	12	43	13	44
56. Effective Operating Theatre team co-ordination requires members to take into account the personalities of other team members	3	13	84	7	22	72	8	14	78
Work Values									
6. Senior staff deserve extra benefits and privileges*	16	28	56	13	23	64	65	13	22
7. I do my best work when people leave me alone	34	28	38	33	24	43	16	36	49
9. It bothers me when others do not respect my professional capabilities	10	31	58	3	10	87	4	9	87
15. I try to be a person that others will enjoy working with	0	11	89	0	3	97	2	12	86
20. It is important that my competence be acknowledged by others	7	46	47	5	28	67	6	18	77
23. I value compliments about my work	0	10	90	1	8	91	4	9	86
26. As long as the work gets done, I don't care what others think of me	74	13	13	75	12	13	59	16	25
28. A good reputation in the Operating Theatre is important to me	2	15	83	2	14	83	4	18	78
35. I value the goodwill of my fellow workers- I care that others see me as friendly and co-operative	2	7	90	1	3	96	1	15	85
40. It is an insult to be forced to wait unnecessarily for other members of the Operating Theatre team	25	36	39	41	23	36	31	25	44
52. In the Operating Theatre, I get the respect that a person of my profession deserves*	4	28	68	13	24	63	31	21	48

Error/ Procedural Compliance									
29. Errors are a sign of incompetence	65	18	17	72	9	19	67	14	20
33. I am ashamed when I make a mistake in front of other team members	27	35	39	21	16	63	25	27	48
37. Procedures and policies are strictly followed in our Operating Theatre	24	30	46	17	30	52	33	18	49
41. Mistakes are handled appropriately in this hospital	27	33	41	16	40	44	39	22	39
53. Human error is inevitable*	4	7	90	3	11	86	13	18	70
59. Team members frequently disregard rules or guidelines (e.g. handwashing, treatment protocols/clinical pathways, sterile field) developed for our Operating Theatre*	65	18	17	69	15	16	48	12	41
Organizational Climate									
2. The department provides adequate, timely information about events in the hospital which might affect my work	41	33	26	34	36	30	49	18	34
24. Working in this hospital is like being part of a large family*	28	18	54	29	24	47	49	13	38
30. Departmental leadership listens to staff and cares about our concerns*	27	20	53	23	29	48	51	9	39
47. I am proud to work for this hospital	10	30	60	8	32	60	19	31	51
57. I like my job*	2	5	93	3	5	91	10	12	78
58. I am provided with adequate training to successfully accomplish my job*	6	17	77	11	13	76	34	15	51

Table B. Error in medicine

ORMAQ Question	Position	% Disagree	% Neutral	% Agree
67. I rarely witness an error where one or more team members lack the knowledge to perform the needed action	Consultant surgeons	21	16	64
	Trainee surgeons	24	11	65
	Nurses	19	15	66
68. Errors committed during patient management are not important, as long as the patient improves	Consultant surgeons	85	9	6
	Trainee surgeons	80	8	12
	Nurses	95	5	0
69. I make errors in theatre	Consultant surgeons	8	18	74
	Trainee surgeons	11	21	68
	Nurses	27	29	44
70. Medical errors are discussed to prevent recurrence	Consultant surgeons	7	8	85
	Trainee surgeons	11	11	78
	Nurses	21	21	58
71. A confidential reporting system that documents medical errors is important for safety	Consultant surgeons	9	15	76
	Trainee surgeons	3	10	87
	Nurses	3	4	92

Table C. Strategies to improve effectiveness of Operating Theatre teams

Strategy to improve efficiency of OT team	Consultant (n=53)		Trainee (n=16)		Nurse (n=35)	
	count	%	count	%	count	%
Constant teams	9	17.0	0	-	2	5.7
Management support/ leadership	5	9.4	1	6.3	1	2.9
Better communication	5	9.4	1	6.3	11	31.4
Feeling valued	3	5.7	0	-	2	5.7
Training/ knowing procedures	3	5.7	1	6.3	7	20.0
Faster anaesthetists	3	5.7	0	-	0	-
More flexibility from anaesthetist and nurses	2	3.8	1	6.3	0	-
Encouraging excellence	2	3.8	1	6.3	0	-
Open attitude to problems	2	3.8	1	6.3	0	-
Good inter-discipline relations	2	3.8	0	-	0	-
Financial incentives	2	3.8	0	-	0	-
Socialising/ team building	2	3.8	0	-	1	2.9

Several additional strategies were mentioned once only

Table D. Strategies to improve job satisfaction

Strategy to improve job satisfaction	Consultant (n=60)		Trainee (n=19)		Nurse (n=61)	
	count	%	count	%	count	%
Feedback about patient outcomes	6	10	1	5.3	3	4.9
Pay increase	4	6.7	1	5.3	5	8.2
Recognition for good work	4	6.7	3	15.8	7	11.5
Realistic staffing levels/ more staff	4	6.7	0	-	4	6.6
Friendly working atmosphere	4	6.7	2	10.5	1	1.6
Keeping stable teams	4	6.7	0	-	0	-
Valued by NHS	3	5.0	0	-	2	3.3
Supportive and considerate leadership	3	5.0	0	-	10	16.4
Co-operating as a team	3	5.0	0	-	4	6.6
Socialising and teambuilding	3	5.0	0	-	0	-
Decrease workload	2	3.3	0	-	1	1.6
Not overrunning list	2	3.3	0	-	2	3.3
Improved communications and sharing knowledge	2	3.3	0	-	3	4.9
Involvement in decision making	2	3.3	2	10.5	1	1.6
Time for training and education	2	3.3	3	15.8	10	16.4

Several additional strategies were mentioned once only

Table E. Leadership

Position	Style			
	A	B	C	D
Consultant surgeons use:	8%	54%	37%	1%
Trainee surgeons encounter:	30%	58%	10%	2%
Trainee surgeons prefer:	4%	61%	33%	2%
Nurses encounter:	59%	28%	10%	3%
Nurses prefer:	4%	37%	39%	20%

A. Autocratic; B. Consultation; C. Joint; D. Delegation