



Australian Government

National Health and Medical Research Council

2019 Survey of research culture in Australian NHMRC-funded institutions

Appendix B: Overall frequency results

2019 Survey of research culture in NHMRC-funded institutions - Overall results
A. Your role

q1. In what capacity are you participating in this survey?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Senior researcher	658	37.2	37.2	37.2
	Mid-career researcher	397	22.5	22.5	59.7
	Junior researcher	284	16.1	16.1	75.7
	Research student	149	8.4	8.4	84.2
	Representative of an institution	106	6.0	6.0	90.2
	Current member of a Human Research Ethics Committee (HREC)	126	7.1	7.1	97.3
	Current member of an Animal Ethics Committee (AEC)	48	2.7	2.7	100.0
	Total	1768	100.0	100.0	

q3mr. How would you describe your research / the research conducted at your institution / the proposals considered by your ethics committee? (Multiple Response)

		Frequency	% of respondents
Valid	Discovery	796	45.0%
	Preclinical	517	29.2%
	Hospital clinical	443	25.1%
	Other clinical	356	20.1%
	Health services	514	29.1%
	Public health	633	35.8%
	Epidemiology	492	27.8%
	Implementation research	402	22.7%
	Qualitative research	540	30.5%
	Quantitative research	875	49.5%
	Translational research	758	42.9%
	Research on research (meta-research)	153	8.7%
	Other	72	4.1%
	Number of Respondents	1768	100.0%

q4. Which of the following most closely matches your current primary role / job title?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Chief Executive Officer	1	.1	1.0	1.0
	Executive Director	1	.1	1.0	1.9
	General Manager	2	.1	1.9	3.8
	Deputy Vice-Chancellor	4	.2	3.8	7.6
	Pro Vice-Chancellor	2	.1	1.9	9.5
	Director	15	.8	14.3	23.8
	Department / Faculty / Research Group Head	3	.2	2.9	26.7
	Research Administration Officer	39	2.2	37.1	63.8
	Research Integrity Advisor	2	.1	1.9	65.7
	Research Integrity Officer	14	.8	13.3	79.0
	Other	22	1.2	21.0	100.0
	Total	105	5.9	100.0	
Missing	System	1663	94.1		
Total		1768	100.0		

2019 Survey of research culture in NHMRC-funded institutions - Overall results
A. Your role

q5. What is your current role on the Human Research Ethics Committee (HREC)?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Chair	17	1.0	13.5	13.5
	Layperson	31	1.8	24.6	38.1
	Person with knowledge of, and current experience in, the professional care, counselling or treatment of people	18	1.0	14.3	52.4
	Person who performs a pastoral care role in a community	8	.5	6.3	58.7
	Lawyer	6	.3	4.8	63.5
	Person with knowledge of, and current experience in, the areas of research regularly considered by the HREC	39	2.2	31.0	94.4
	Other	7	.4	5.6	100.0
	Total	126	7.1	100.0	
Missing	System	1642	92.9		
Total		1768	100.0		

q6. What is your current role on the Animal Ethics Committee (AEC)?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Chair	8	.5	16.7	16.7
	Category A member	8	.5	16.7	33.3
	Category B member	3	.2	6.3	39.6
	Category C member	9	.5	18.8	58.3
	Category D member	12	.7	25.0	83.3
	Person responsible for the routine care of animals	4	.2	8.3	91.7
	Other	4	.2	8.3	100.0
	Total	48	2.7	100.0	
Missing	System	1720	97.3		
Total		1768	100.0		

q7a. How many students / staff are you currently a primary supervisor for?
(Honours students, including MBBS research years)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	274	15.5	37.4	37.4
	1	236	13.3	32.2	69.7
	2	134	7.6	18.3	88.0
	3	45	2.5	6.1	94.1
	4	18	1.0	2.5	96.6
	5	9	.5	1.2	97.8
	6	5	.3	.7	98.5
	8	4	.2	.5	99.0
	10	2	.1	.3	99.3
	12	2	.1	.3	99.6
	14	1	.1	.1	99.7
	15	1	.1	.1	99.9
	20	1	.1	.1	100.0
	Total	732	41.4	100.0	
Missing	System	1036	58.6		
Total		1768	100.0		

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A. Your role

**q7b. How many students / staff are you currently a primary supervisor for?
(Masters students)**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	298	16.9	43.6	43.6
	1	235	13.3	34.4	77.9
	2	94	5.3	13.7	91.7
	3	26	1.5	3.8	95.5
	4	13	.7	1.9	97.4
	5	6	.3	.9	98.2
	6	4	.2	.6	98.8
	7	1	.1	.1	99.0
	8	1	.1	.1	99.1
	10	1	.1	.1	99.3
	12	2	.1	.3	99.6
	13	1	.1	.1	99.7
	19	1	.1	.1	99.9
	125	1	.1	.1	100.0
	Total		684	38.7	100.0
Missing	System	1084	61.3		
Total		1768	100.0		

**q7c. How many students / staff are you currently a primary supervisor for?
(Doctoral students)**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	100	5.7	10.3	10.3
	1	180	10.2	18.5	28.7
	2	195	11.0	20.0	48.7
	3	145	8.2	14.9	63.6
	4	111	6.3	11.4	75.0
	5	97	5.5	9.9	84.9
	6	61	3.5	6.3	91.2
	7	18	1.0	1.8	93.0
	8	23	1.3	2.4	95.4
	9	12	.7	1.2	96.6
	10	9	.5	.9	97.5
	11	2	.1	.2	97.7
	12	8	.5	.8	98.6
	13	2	.1	.2	98.8
	14	6	.3	.6	99.4
	16	1	.1	.1	99.5
	17	1	.1	.1	99.6
	18	1	.1	.1	99.7
	20	1	.1	.1	99.8
	23	1	.1	.1	99.9
	25	1	.1	.1	100.0
Total		975	55.1	100.0	
Missing	System	793	44.9		
Total		1768	100.0		

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A. Your role

**q7d. How many students / staff are you currently a primary supervisor for?
(Technical assistants)**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	329	18.6	67.8	67.8
	1	90	5.1	18.6	86.4
	2	39	2.2	8.0	94.4
	3	13	.7	2.7	97.1
	4	8	.5	1.6	98.8
	5	1	.1	.2	99.0
	6	1	.1	.2	99.2
	8	2	.1	.4	99.6
	12	1	.1	.2	99.8
	15	1	.1	.2	100.0
	Total	485	27.4	100.0	
Missing	System	1283	72.6		
Total		1768	100.0		

**q7e. How many students / staff are you currently a primary supervisor for?
(Research assistants)**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	145	8.2	17.7	17.7
	1	278	15.7	33.9	51.5
	2	187	10.6	22.8	74.3
	3	84	4.8	10.2	84.5
	4	37	2.1	4.5	89.0
	5	39	2.2	4.8	93.8
	6	19	1.1	2.3	96.1
	7	3	.2	.4	96.5
	8	9	.5	1.1	97.6
	9	1	.1	.1	97.7
	10	10	.6	1.2	98.9
	11	1	.1	.1	99.0
	12	1	.1	.1	99.1
	13	1	.1	.1	99.3
	15	2	.1	.2	99.5
	17	1	.1	.1	99.6
	24	1	.1	.1	99.8
	27	1	.1	.1	99.9
	120	1	.1	.1	100.0
	Total	821	46.4	100.0	
Missing	System	947	53.6		
Total		1768	100.0		

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A. Your role

**q7f. How many students / staff are you currently a primary supervisor for?
(Postdoctoral researchers)**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	156	8.8	18.4	18.4
	1	237	13.4	27.9	46.3
	2	185	10.5	21.8	68.1
	3	109	6.2	12.8	80.9
	4	65	3.7	7.7	88.6
	5	36	2.0	4.2	92.8
	6	16	.9	1.9	94.7
	7	13	.7	1.5	96.2
	8	15	.8	1.8	98.0
	9	4	.2	.5	98.5
	10	5	.3	.6	99.1
	12	4	.2	.5	99.5
	15	1	.1	.1	99.6
	25	1	.1	.1	99.8
	30	2	.1	.2	100.0
	Total	849	48.0	100.0	
Missing	System	919	52.0		
Total		1768	100.0		

**q7g. How many students / staff are you currently a primary supervisor for?
(Clinical researchers)**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	305	17.3	57.8	57.8
	1	75	4.2	14.2	72.0
	2	54	3.1	10.2	82.2
	3	25	1.4	4.7	86.9
	4	30	1.7	5.7	92.6
	5	18	1.0	3.4	96.0
	6	2	.1	.4	96.4
	8	6	.3	1.1	97.5
	10	7	.4	1.3	98.9
	12	1	.1	.2	99.1
	15	2	.1	.4	99.4
	18	1	.1	.2	99.6
	30	1	.1	.2	99.8
	40	1	.1	.2	100.0
		Total	528	29.9	100.0
Missing	System	1240	70.1		
Total		1768	100.0		

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A. Your role

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
q7a. How many students / staff are you currently a primary supervisor for? (Honours students, including MBBS research years)	732	0	20	1.24	1.774
q7b. How many students / staff are you currently a primary supervisor for? (Masters students)	684	0	125	1.19	4.994
q7c. How many students / staff are you currently a primary supervisor for? (Doctoral students)	975	0	25	3.24	2.868
q7d. How many students / staff are you currently a primary supervisor for? (Technical assistants)	485	0	15	.60	1.342
q7e. How many students / staff are you currently a primary supervisor for? (Research assistants)	821	0	120	2.21	4.775
q7f. How many students / staff are you currently a primary supervisor for? (Postdoctoral researchers)	849	0	30	2.26	2.616
q7g. How many students / staff are you currently a primary supervisor for? (Clinical researchers)	528	0	40	1.38	3.085
Valid N (listwise)	387				

q8. Approximately how many researchers are there at your institution?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 to 20	5	.3	4.8	4.8
	21 to 50	5	.3	4.8	9.6
	51 to 100	7	.4	6.7	16.3
	101 to 150	5	.3	4.8	21.2
	151 to 200	5	.3	4.8	26.0
	More than 200	77	4.4	74.0	100.0
	Total	104	5.9	100.0	
Missing	System	1664	94.1		
Total		1768	100.0		

2019 Survey of research culture in NHMRC-funded institutions - Overall results
B. Knowledge and attitudes

q9mr. What motivates you in your work as a researcher? (Multiple Response)

		Frequency	% of respondents
Valid	Improving my knowledge and understanding	690	46.4%
	Making research discoveries for the benefit of society	1235	83.0%
	Gaining recognition from my peers	102	6.9%
	Progressing my career	261	17.5%
	Gaining recognition from the public	18	1.2%
	Satisfying my curiosity	478	32.1%
	Working as part of a team	336	22.6%
	Communicating research to others	287	19.3%
	Training the next generation of researchers	627	42.1%
	Earning a salary	233	15.7%
	None of the above	5	0.3%
	Don't know / can't say	1	0.1%
Number of Respondents		1488	100.0%

q10mr. Which of the following do you believe are most important for 'high quality research'? (Multiple Response)

		Frequency	% of respondents
Valid	Rigorous	1290	73.0%
	Transparent	720	40.8%
	Honest	620	35.1%
	Beneficial to society	1010	57.2%
	Respectful	315	17.8%
	Innovative	735	41.6%
	Legal	134	7.6%
	Original	571	32.3%
	Justified	424	24.0%
	Accurate	930	52.7%
	Ethical	1227	69.5%
	Open	183	10.4%
	Other	38	2.2%
Number of Respondents		1766	100.0%

q12. To what extent do you feel that your department / research group prioritises honesty and integrity when researchers propose, perform and report research?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	18	1.0	1.2	1.2
	Somewhat	74	4.2	5.1	6.3
	Moderately	184	10.4	12.7	19.0
	Very much	551	31.2	38.0	57.1
	Completely	622	35.2	42.9	100.0
	Total	1449	82.0	100.0	
Missing	Don't know / can't say	28	1.6		
	System	291	16.5		
	Total	319	18.0		
Total		1768	100.0		

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 B. Knowledge and attitudes

**q13mr. Which of the following do you think matters most to the validity of your research?
 (Multiple Response)**

		Frequency	% of respondents
Valid	The past work of others	111	7.5%
	Your hypothesis	261	17.7%
	Your experimental design	1159	78.7%
	The statistical power of your experiments	622	42.3%
	Avoidance of experimental biases	897	60.9%
	The absence of conflicts of interest	381	25.9%
	Validation via publication in a peer-review journal	494	33.6%
	None of the above	36	2.4%
Number of Respondents		1472	100.0%

q14a. Failure to build on what is already known from previous research

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	44	2.5	3.0	3.0
	A little	301	17.0	20.7	23.8
	A fair amount	395	22.3	27.2	51.0
	A lot	412	23.3	28.4	79.3
	To a great extent	300	17.0	20.7	100.0
	Total	1452	82.1	100.0	
Missing	Don't know / can't say	13	.7		
	System	303	17.1		
	Total	316	17.9		
Total		1768	100.0		

q14b. Conduct of unnecessary research that might have been avoided if all negative or neutral studies were routinely published

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	17	1.0	1.2	1.2
	A little	201	11.4	14.1	15.3
	A fair amount	385	21.8	27.0	42.3
	A lot	445	25.2	31.2	73.5
	To a great extent	378	21.4	26.5	100.0
	Total	1426	80.7	100.0	
Missing	Don't know / can't say	38	2.1		
	System	304	17.2		
	Total	342	19.3		
Total		1768	100.0		

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 B. Knowledge and attitudes

q14c. Problems for researchers when previous experiments / studies are unreliable because of biases or inadequate sample size

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	10	.6	.7	.7
	A little	249	14.1	17.4	18.1
	A fair amount	466	26.4	32.6	50.7
	A lot	457	25.8	31.9	82.6
	To a great extent	249	14.1	17.4	100.0
	Total	1431	80.9	100.0	
Missing	Don't know / can't say	32	1.8		
	System	305	17.3		
	Total	337	19.1		
Total		1768	100.0		

q14d. Time wasted when essential information on study methods or materials are poorly described or inaccessible

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	15	.8	1.0	1.0
	A little	332	18.8	23.0	24.0
	A fair amount	445	25.2	30.8	54.9
	A lot	406	23.0	28.1	83.0
	To a great extent	245	13.9	17.0	100.0
	Total	1443	81.6	100.0	
Missing	Don't know / can't say	21	1.2		
	System	304	17.2		
	Total	325	18.4		
Total		1768	100.0		

q14e. Failure to consider whether and how research results might have value to downstream users (other researchers, clinicians, etc)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	91	5.1	6.4	6.4
	A little	415	23.5	29.1	35.4
	A fair amount	375	21.2	26.3	61.7
	A lot	308	17.4	21.6	83.3
	To a great extent	239	13.5	16.7	100.0
	Total	1428	80.8	100.0	
Missing	Don't know / can't say	33	1.9		
	System	307	17.4		
	Total	340	19.2		
Total		1768	100.0		

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 B. Knowledge and attitudes

q15. How important do you think reproducibility is to research?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all important	4	.2	.2	.2
	Not that important	9	.5	.5	.8
	Somewhat important	97	5.5	5.7	6.5
	Quite important	239	13.5	14.1	20.7
	Very important	1341	75.8	79.3	100.0
Total		1690	95.6	100.0	
Missing	Don't know / can't say	9	.5		
	System	69	3.9		
	Total	78	4.4		
Total		1768	100.0		

q16mr. Before today, had you heard of the term 'crisis of reproducibility' in relation to issues in research? (Multiple Response)

		Frequency	% of respondents
Valid	Yes, from the mainstream media	478	28.2%
	Yes, from research journals	739	43.5%
	Yes, from discussions at conferences	589	34.7%
	Yes, from discussions with my colleagues	817	48.1%
	Yes, from online sources (e.g. social media, podcasts, blogs)	41	2.4%
	Yes, from elsewhere	69	4.1%
	No	436	25.7%
	Don't know / can't say	30	1.8%
Number of Respondents		1698	100.0%

q17. Which of the following statements do you feel is most accurate when thinking about reproducibility in research?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	There is no crisis of reproducibility	53	3.0	4.1	4.1
	There is a slight crisis of reproducibility	520	29.4	40.0	44.0
	There is a significant crisis of reproducibility	728	41.2	56.0	100.0
	Total	1301	73.6	100.0	
Missing	Don't know / can't say	391	22.1		
	System	76	4.3		
	Total	467	26.4		
Total		1768	100.0		

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 B. Knowledge and attitudes

q18a. I think that a failure to reproduce a result most often means that the original finding is wrong

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	99	5.6	6.1	6.1
	Disagree	589	33.3	36.3	42.4
	Neither agree nor disagree	631	35.7	38.9	81.4
	Agree	271	15.3	16.7	98.1
	Strongly agree	31	1.8	1.9	100.0
	Total	1621	91.7	100.0	
Missing	Don't know / can't say	61	3.5		
	System	86	4.9		
	Total	147	8.3		
Total		1768	100.0		

q18b. I think that a failure to reproduce a result rarely detracts from the validity of the original finding

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	127	7.2	7.9	7.9
	Disagree	784	44.3	49.0	56.9
	Neither agree nor disagree	404	22.9	25.2	82.1
	Agree	256	14.5	16.0	98.1
	Strongly agree	30	1.7	1.9	100.0
	Total	1601	90.6	100.0	
Missing	Don't know / can't say	78	4.4		
	System	89	5.0		
	Total	167	9.4		
Total		1768	100.0		

q18c. I think that the failure to reproduce research is a major problem in my field

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	54	3.1	3.9	3.9
	Disagree	340	19.2	24.9	28.8
	Neither agree nor disagree	355	20.1	26.0	54.8
	Agree	495	28.0	36.2	90.9
	Strongly agree	124	7.0	9.1	100.0
	Total	1368	77.4	100.0	
Missing	Don't know / can't say	52	2.9		
	System	348	19.7		
	Total	400	22.6		
Total		1768	100.0		

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q18d. I think that the failure to reproduce research is a major problem for all fields

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	29	1.6	2.3	2.3
	Disagree	192	10.9	15.4	17.7
	Neither agree nor disagree	351	19.9	28.1	45.9
	Agree	541	30.6	43.4	89.3
	Strongly agree	134	7.6	10.7	100.0
	Total	1247	70.5	100.0	
Missing	Don't know / can't say	171	9.7		
	System	350	19.8		
	Total	521	29.5		
Total		1768	100.0		

q19a. Pressure to publish for career advancement

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	37	2.1	2.7	2.7
	Slightly	164	9.3	11.8	14.5
	Moderately	328	18.6	23.7	38.2
	Considerably	461	26.1	33.3	71.4
	To a great extent	396	22.4	28.6	100.0
	Total	1386	78.4	100.0	
Missing	Don't know / can't say	115	6.5		
	System	267	15.1		
	Total	382	21.6		
Total		1768	100.0		

**q19b. Insufficient oversight / mentoring by principal investigator for the research group
 (e.g. reviewing raw data)**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	39	2.2	2.8	2.8
	Slightly	242	13.7	17.5	20.3
	Moderately	489	27.7	35.4	55.8
	Considerably	446	25.2	32.3	88.1
	To a great extent	165	9.3	11.9	100.0
	Total	1381	78.1	100.0	
Missing	Don't know / can't say	116	6.6		
	System	271	15.3		
	Total	387	21.9		
Total		1768	100.0		

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q19c. Insufficient peer review of grant applications

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	315	17.8	23.4	23.4
	Slightly	496	28.1	36.8	60.3
	Moderately	329	18.6	24.4	84.7
	Considerably	140	7.9	10.4	95.1
	To a great extent	66	3.7	4.9	100.0
	Total	1346	76.1	100.0	
Missing	Don't know / can't say	154	8.7		
	System	268	15.2		
	Total	422	23.9		
Total		1768	100.0		

q19d. Insufficient peer review of research publications

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	124	7.0	8.9	8.9
	Slightly	388	21.9	27.8	36.7
	Moderately	451	25.5	32.4	69.1
	Considerably	322	18.2	23.1	92.2
	To a great extent	109	6.2	7.8	100.0
	Total	1394	78.8	100.0	
Missing	Don't know / can't say	104	5.9		
	System	270	15.3		
	Total	374	21.2		
Total		1768	100.0		

q19e. Selective reporting of results

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	12	.7	.8	.8
	Slightly	84	4.8	5.9	6.7
	Moderately	318	18.0	22.3	29.1
	Considerably	587	33.2	41.2	70.2
	To a great extent	424	24.0	29.8	100.0
	Total	1425	80.6	100.0	
Missing	Don't know / can't say	71	4.0		
	System	272	15.4		
	Total	343	19.4		
Total		1768	100.0		

2019 Survey of research culture in NHMRC-funded institutions - Overall results
 B. Knowledge and attitudes

q19f. Original findings were inadequately robust because of insufficient replication by the research group publishing the work

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	25	1.4	2.0	2.0
	Slightly	233	13.2	18.4	20.3
	Moderately	443	25.1	34.9	55.2
	Considerably	422	23.9	33.3	88.5
	To a great extent	146	8.3	11.5	100.0
	Total	1269	71.8	100.0	
Missing	Don't know / can't say	229	13.0		
	System	270	15.3		
	Total	499	28.2		
Total		1768	100.0		

q19g. Original findings obtained with low statistical power / poor statistical analysis

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	15	.8	1.1	1.1
	Slightly	184	10.4	13.3	14.4
	Moderately	469	26.5	33.9	48.2
	Considerably	492	27.8	35.5	83.8
	To a great extent	225	12.7	16.2	100.0
	Total	1385	78.3	100.0	
Missing	Don't know / can't say	116	6.6		
	System	267	15.1		
	Total	383	21.7		
Total		1768	100.0		

q19h. Mistakes or inadequate expertise in reproduction efforts

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	37	2.1	2.8	2.8
	Slightly	392	22.2	30.1	32.9
	Moderately	514	29.1	39.5	72.4
	Considerably	293	16.6	22.5	94.9
	To a great extent	66	3.7	5.1	100.0
	Total	1302	73.6	100.0	
Missing	Don't know / can't say	195	11.0		
	System	271	15.3		
	Total	466	26.4		
Total		1768	100.0		

2019 Survey of research culture in NHMRC-funded institutions - Overall results
 B. Knowledge and attitudes

q19i. Information not available from the original research group (e.g. protocols, data, code, reagent information)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	18	1.0	1.3	1.3
	Slightly	255	14.4	18.5	19.8
	Moderately	437	24.7	31.8	51.6
	Considerably	460	26.0	33.4	85.0
	To a great extent	206	11.7	15.0	100.0
	Total	1376	77.8	100.0	
Missing	Don't know / can't say	119	6.7		
	System	273	15.4		
	Total	392	22.2		
Total		1768	100.0		

q19j. Methods need technical expertise that is difficult for others to reproduce

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	69	3.9	5.1	5.1
	Slightly	386	21.8	28.4	33.4
	Moderately	444	25.1	32.6	66.1
	Considerably	358	20.2	26.3	92.4
	To a great extent	104	5.9	7.6	100.0
	Total	1361	77.0	100.0	
Missing	Don't know / can't say	137	7.7		
	System	270	15.3		
	Total	407	23.0		
Total		1768	100.0		

q19k. Variability in standard reagents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	84	4.8	8.6	8.6
	Slightly	321	18.2	32.8	41.4
	Moderately	339	19.2	34.6	76.0
	Considerably	186	10.5	19.0	95.0
	To a great extent	49	2.8	5.0	100.0
	Total	979	55.4	100.0	
Missing	Don't know / can't say	518	29.3		
	System	271	15.3		
	Total	789	44.6		
Total		1768	100.0		

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q19l. Poor experimental design

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	28	1.6	2.0	2.0
	Slightly	268	15.2	19.4	21.5
	Moderately	484	27.4	35.1	56.6
	Considerably	436	24.7	31.6	88.2
	To a great extent	163	9.2	11.8	100.0
	Total	1379	78.0	100.0	
Missing	Don't know / can't say	115	6.5		
	System	274	15.5		
	Total	389	22.0		
Total		1768	100.0		

q19m. Fraud (i.e. fabricated or falsified results)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	111	6.3	9.0	9.0
	Slightly	652	36.9	52.8	61.8
	Moderately	237	13.4	19.2	81.0
	Considerably	125	7.1	10.1	91.1
	To a great extent	110	6.2	8.9	100.0
	Total	1235	69.9	100.0	
Missing	Don't know / can't say	265	15.0		
	System	268	15.2		
	Total	533	30.1		
Total		1768	100.0		

q19n. Bad luck

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	460	26.0	37.3	37.3
	Slightly	468	26.5	38.0	75.3
	Moderately	233	13.2	18.9	94.2
	Considerably	59	3.3	4.8	98.9
	To a great extent	13	.7	1.1	100.0
	Total	1233	69.7	100.0	
Missing	Don't know / can't say	264	14.9		
	System	271	15.3		
	Total	535	30.3		
Total		1768	100.0		

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q20a. Research practices in my department / research group follow established institutional policies regarding research

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	15	.8	1.1	1.1
	Disagree	33	1.9	2.5	3.7
	Neither agree nor disagree	80	4.5	6.1	9.8
	Agree	651	36.8	49.7	59.5
	Strongly agree	530	30.0	40.5	100.0
	Total	1309	74.0	100.0	
Missing	Don't know / not applicable	25	1.4		
	System	434	24.5		
	Total	459	26.0		
Total		1768	100.0		

q20b. People in my department / research group implement data management principles within their research projects

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	17	1.0	1.3	1.3
	Disagree	53	3.0	4.1	5.4
	Neither agree nor disagree	116	6.6	8.9	14.3
	Agree	695	39.3	53.5	67.8
	Strongly agree	419	23.7	32.2	100.0
	Total	1300	73.5	100.0	
Missing	Don't know / not applicable	33	1.9		
	System	435	24.6		
	Total	468	26.5		
Total		1768	100.0		

q20c. People in my department / research group appropriately handle data from collection to archival with an intention for potential future re-use

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	20	1.1	1.6	1.6
	Disagree	81	4.6	6.3	7.9
	Neither agree nor disagree	173	9.8	13.5	21.4
	Agree	640	36.2	50.0	71.4
	Strongly agree	366	20.7	28.6	100.0
	Total	1280	72.4	100.0	
Missing	Don't know / not applicable	48	2.7		
	System	440	24.9		
	Total	488	27.6		
Total		1768	100.0		

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q20d. Junior researchers are effectively mentored about responsible research practices

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	54	3.1	3.9	3.9
	Disagree	175	9.9	12.5	16.3
	Neither agree nor disagree	194	11.0	13.8	30.2
	Agree	665	37.6	47.5	77.7
	Strongly agree	313	17.7	22.3	100.0
	Total	1401	79.2	100.0	
Missing	Don't know / not applicable	17	1.0		
	System	350	19.8		
	Total	367	20.8		
Total		1768	100.0		

q20e. Researchers in my immediate research environment are committed to appropriate data and code sharing when publishing research results

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	21	1.2	1.6	1.6
	Disagree	96	5.4	7.4	9.1
	Neither agree nor disagree	209	11.8	16.2	25.3
	Agree	582	32.9	45.1	70.4
	Strongly agree	382	21.6	29.6	100.0
	Total	1290	73.0	100.0	
Missing	Don't know / not applicable	40	2.3		
	System	438	24.8		
	Total	478	27.0		
Total		1768	100.0		

q20f. Researchers in my immediate research environment are committed to open access publishing when publishing research results

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	38	2.1	3.0	3.0
	Disagree	178	10.1	13.9	16.8
	Neither agree nor disagree	367	20.8	28.6	45.5
	Agree	445	25.2	34.7	80.2
	Strongly agree	254	14.4	19.8	100.0
	Total	1282	72.5	100.0	
Missing	Don't know / not applicable	48	2.7		
	System	438	24.8		
	Total	486	27.5		
Total		1768	100.0		

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q21mr. Which of the following procedures have you / your research group established to ensure reproducibility in your work? (Multiple Response)

		Frequency	% of respondents
Valid	Estimate required number of participants / animals per experimental cohort	881	66.1%
	Estimate statistical power	979	73.4%
	Randomly allocate participants / animals to experimental cohorts	817	61.3%
	Apply inclusion or exclusion criteria	926	69.5%
	Procedures for accounting for dropouts / losses documented in the analysis plan	677	50.8%
	Blind outcome assessment	687	51.5%
	Transparent reporting of study design and methods	1168	87.6%
	In house replication before publication	458	34.4%
	Inclusion of positive and negative controls	793	59.5%
	Validation of tools or reagents such as antibodies, SiRNAs, small molecules	600	45.0%
	Other	139	10.4%
	No procedures have been established to ensure reproducibility in our work	14	1.1%
	Don't know / can't say	21	1.6%
Number of Respondents		1333	100.0%

q22. When were such procedures first established within your research group?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Within the last year	11	.6	.9	.9
	1 year to less than 2 years ago	21	1.2	1.7	2.5
	2 years to less than 5 years ago	113	6.4	8.9	11.4
	More than 5 years ago	284	16.1	22.4	33.9
	These procedures have been in place since I started working in my research group	838	47.4	66.1	100.0
	Total	1267	71.7	100.0	
Missing	System	501	28.3		
Total		1768	100.0		

q23. Did the quality of your research change after these procedures were introduced?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes, the quality of my research improved	189	10.7	61.2	61.2
	Yes, the quality of my research worsened	3	.2	1.0	62.1
	No, the quality of my research remained unchanged	117	6.6	37.9	100.0
	Total	309	17.5	100.0	
Missing	Don't know / can't say	120	6.8		
	System	1339	75.7		
	Total	1459	82.5		
Total		1768	100.0		

q24. Have you / your research group experienced any barriers when trying to implement procedures to improve reproducibility of research?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	253	14.3	19.2	19.2
	No	735	41.6	55.9	75.1
	I / we haven't ever tried to implement such procedures	103	5.8	7.8	83.0
	Don't know / can't say	224	12.7	17.0	100.0
	Total	1315	74.4	100.0	
Missing	System	453	25.6		
Total		1768	100.0		

q26mr. Have you ever tried to reproduce a finding from a published paper? (Multiple Response)

		Frequency	% of respondents
Valid	Yes, and I was able to fully reproduce the finding	388	29.6%
	Yes, but I was not able to fully reproduce the finding	576	43.9%
	No, I have not tried to reproduce a finding from a published paper	526	40.1%
Number of Respondents		1313	100.0%

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q27. Did you try to publish findings that disagreed with those in a published paper?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	381	21.5	66.3	66.3
	No	194	11.0	33.7	100.0
	Total	575	32.5	100.0	
Missing	System	1193	67.5		
Total		1768	100.0		

q29. Were the differences in findings ever resolved by you or another researcher?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	172	9.7	30.1	30.1
	No	400	22.6	69.9	100.0
	Total	572	32.4	100.0	
Missing	System	1196	67.6		
Total		1768	100.0		

q30mr. Have you ever tried to reproduce a finding from your own published paper? (Multiple Response)

		Frequency	% of respondents
Valid	Yes, and I was able to fully reproduce the finding	662	49.9%
	Yes, but I was not able to fully reproduce the finding	112	8.4%
	No, I have not tried to reproduce a finding from my own published paper	558	42.1%
	I have not published any work to date	49	3.7%
Number of Respondents		1326	100.0%

q31. Have you ever been aware that a finding you had published was not able to be reproduced?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	130	7.4	10.2	10.2
	No	1141	64.5	89.8	100.0
	Total	1271	71.9	100.0	
Missing	System	497	28.1		
Total		1768	100.0		

q33a. in class / tutorials

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	23	1.3	28.0	28.0
	Annually or less often	20	1.1	24.4	52.4
	Quarterly	22	1.2	26.8	79.3
	Monthly	10	.6	12.2	91.5
	Weekly	7	.4	8.5	100.0
	Total	82	4.6	100.0	
Missing	Don't know / can't say	35	2.0		
	System	1651	93.4		
Total	Total	1686	95.4		
Total		1768	100.0		

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q33b. with your immediate peers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	35	2.0	2.7	2.7
	Annually or less often	158	8.9	12.3	15.1
	Quarterly	272	15.4	21.2	36.3
	Monthly	379	21.4	29.6	65.9
	Weekly	360	20.4	28.1	94.0
	Daily	77	4.4	6.0	100.0
	Total	1281	72.5	100.0	
Missing	Don't know / can't say	20	1.1		
	System	467	26.4		
	Total	487	27.5		
Total		1768	100.0		

q33c. with a supervisor

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	20	1.1	5.7	5.7
	Annually or less often	45	2.5	12.7	18.4
	Quarterly	77	4.4	21.8	40.2
	Monthly	130	7.4	36.8	77.1
	Weekly	80	4.5	22.7	99.7
	Daily	1	.1	.3	100.0
	Total	353	20.0	100.0	
Missing	Don't know / can't say	8	.5		
	System	1407	79.6		
	Total	1415	80.0		
Total		1768	100.0		

q33d. with a mentor

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	208	11.8	18.0	18.0
	Annually or less often	309	17.5	26.8	44.8
	Quarterly	259	14.6	22.4	67.2
	Monthly	257	14.5	22.3	89.5
	Weekly	114	6.4	9.9	99.4
	Daily	7	.4	.6	100.0
	Total	1154	65.3	100.0	
Missing	Don't know / can't say	136	7.7		
	System	478	27.0		
	Total	614	34.7		
Total		1768	100.0		

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q33e. with a senior staff member

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	163	9.2	11.2	11.2
	Annually or less often	341	19.3	23.4	34.6
	Quarterly	351	19.9	24.1	58.6
	Monthly	383	21.7	26.3	84.9
	Weekly	190	10.7	13.0	97.9
	Daily	30	1.7	2.1	100.0
	Total	1458	82.5	100.0	
Missing	Don't know / can't say	79	4.5		
	System	231	13.1		
	Total	310	17.5		
Total		1768	100.0		

q33f. with an ethics committee member

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	364	20.6	29.7	29.7
	Annually or less often	482	27.3	39.3	69.0
	Quarterly	228	12.9	18.6	87.6
	Monthly	128	7.2	10.4	98.0
	Weekly	23	1.3	1.9	99.9
	Daily	1	.1	.1	100.0
	Total	1226	69.3	100.0	
Missing	Don't know / can't say	66	3.7		
	System	476	26.9		
	Total	542	30.7		
Total		1768	100.0		

q33g. with another member of the ethics committee

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	3	.2	1.8	1.8
	Annually or less often	14	.8	8.6	10.4
	Quarterly	47	2.7	28.8	39.3
	Monthly	84	4.8	51.5	90.8
	Weekly	12	.7	7.4	98.2
	Daily	3	.2	1.8	100.0
	Total	163	9.2	100.0	
Missing	Don't know / can't say	6	.3		
	System	1599	90.4		
	Total	1605	90.8		
Total		1768	100.0		

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q33h. with staff at my institutional research office or equivalent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	38	2.1	16.5	16.5
	Annually or less often	35	2.0	15.2	31.6
	Quarterly	30	1.7	13.0	44.6
	Monthly	60	3.4	26.0	70.6
	Weekly	45	2.5	19.5	90.0
	Daily	23	1.3	10.0	100.0
	Total	231	13.1	100.0	
Missing	Don't know / can't say	17	1.0		
	System	1520	86.0		
	Total	1537	86.9		
Total		1768	100.0		

q33i. with a librarian

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	985	55.7	79.9	79.9
	Annually or less often	189	10.7	15.3	95.2
	Quarterly	47	2.7	3.8	99.0
	Monthly	11	.6	.9	99.9
	Weekly	1	.1	.1	100.0
	Total	1233	69.7	100.0	
Missing	Don't know / can't say	58	3.3		
	System	477	27.0		
	Total	535	30.3		
Total		1768	100.0		

q33j. with a colleague from another institution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	214	12.1	14.3	14.3
	Annually or less often	503	28.5	33.7	48.0
	Quarterly	439	24.8	29.4	77.4
	Monthly	261	14.8	17.5	94.9
	Weekly	68	3.8	4.6	99.5
	Daily	8	.5	.5	100.0
	Total	1493	84.4	100.0	
Missing	Don't know / can't say	48	2.7		
	System	227	12.8		
	Total	275	15.6		
Total		1768	100.0		

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q33k. with a friend or relative

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	534	30.2	35.7	35.7
	Annually or less often	378	21.4	25.3	61.0
	Quarterly	244	13.8	16.3	77.3
	Monthly	193	10.9	12.9	90.2
	Weekly	126	7.1	8.4	98.6
	Daily	21	1.2	1.4	100.0
	Total	1496	84.6	100.0	
Missing	Don't know / can't say	49	2.8		
	System	223	12.6		
	Total	272	15.4		
Total		1768	100.0		

q33l. with a member of the general public

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	686	38.8	46.7	46.7
	Annually or less often	484	27.4	32.9	79.6
	Quarterly	180	10.2	12.3	91.9
	Monthly	93	5.3	6.3	98.2
	Weekly	23	1.3	1.6	99.8
	Daily	3	.2	.2	100.0
	Total	1469	83.1	100.0	
Missing	Don't know / can't say	74	4.2		
	System	225	12.7		
	Total	299	16.9		
Total		1768	100.0		

q34. Do you have informal discussions about responsible research practices (e.g. after work, in social situations)?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	1061	60.0	67.4	67.4
	No	411	23.2	26.1	93.5
	Not relevant to my role	57	3.2	3.6	97.1
	Don't know / can't say	46	2.6	2.9	100.0
	Total	1575	89.1	100.0	
Missing	System	193	10.9		
Total		1768	100.0		

q35. Have you wanted to have discussions about responsible research practices but felt unable to do so?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	247	14.0	15.7	15.7
	No	1324	74.9	84.3	100.0
	Total	1571	88.9	100.0	
Missing	System	197	11.1		
Total		1768	100.0		

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q36mr. At what stages do you generally discuss responsible research practices with your supervisors / senior colleagues / senior administrators? (Multiple Response)

		Frequency	% of respondents
Valid	When ethics / grant applications are being prepared	914	69.5%
	When papers are being prepared for publication	887	67.4%
	During annual career development sessions	315	23.9%
	At regular research group meetings	897	68.2%
	When data analysis is being discussed	1010	76.7%
	When I first started work / study, but not since	16	1.2%
	Other	90	6.8%
	Never	35	2.7%
	Don't know / can't say	24	1.8%
Number of Respondents		1316	100.0%

q37a. I have easy access to an individual(s) with appropriate expertise that I can ask for advice about responsible research practices

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	28	1.6	1.9	1.9
	Disagree	99	5.6	6.6	8.5
	Neither agree nor disagree	143	8.1	9.5	18.0
	Agree	674	38.1	44.9	62.9
	Strongly agree	556	31.4	37.1	100.0
	Total	1500	84.8	100.0	
Missing	Don't know / not applicable	24	1.4		
	System	244	13.8		
	Total	268	15.2		
Total		1768	100.0		

q37b. I have easy access to my institution's policies / guidelines about responsible research practices

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	15	.8	1.0	1.0
	Disagree	65	3.7	4.4	5.4
	Neither agree nor disagree	146	8.3	9.8	15.2
	Agree	679	38.4	45.7	60.9
	Strongly agree	581	32.9	39.1	100.0
	Total	1486	84.0	100.0	
Missing	Don't know / not applicable	37	2.1		
	System	245	13.9		
	Total	282	16.0		
Total		1768	100.0		

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q37c. The regulatory committees that review my research (e.g. ethics committees) understand the kind of research I do

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	43	2.4	3.6	3.6
	Disagree	121	6.8	10.0	13.6
	Neither agree nor disagree	237	13.4	19.6	33.2
	Agree	592	33.5	49.0	82.2
	Strongly agree	215	12.2	17.8	100.0
	Total	1208	68.3	100.0	
Missing	Don't know / not applicable	56	3.2		
	System	504	28.5		
	Total	560	31.7		
Total		1768	100.0		

q37d. I have access to sufficient material resources (e.g. space, equipment or technology) to conduct my research

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	41	2.3	3.2	3.2
	Disagree	147	8.3	11.6	14.9
	Neither agree nor disagree	137	7.7	10.8	25.7
	Agree	631	35.7	49.9	75.6
	Strongly agree	308	17.4	24.4	100.0
	Total	1264	71.5	100.0	
Missing	Don't know / not applicable	4	.2		
	System	500	28.3		
	Total	504	28.5		
Total		1768	100.0		

q37e. I find it difficult to conduct research in a responsible manner because of insufficient access to human resources (e.g. statistical expertise, technical / administrative support)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	288	16.3	22.9	22.9
	Disagree	536	30.3	42.7	65.6
	Neither agree nor disagree	205	11.6	16.3	81.9
	Agree	170	9.6	13.5	95.5
	Strongly agree	57	3.2	4.5	100.0
	Total	1256	71.0	100.0	
Missing	Don't know / not applicable	11	.6		
	System	501	28.3		
	Total	512	29.0		
Total		1768	100.0		

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q37f. Senior administrators in my institution support data and code sharing when publishing research results

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	26	1.5	2.5	2.5
	Disagree	96	5.4	9.1	11.6
	Neither agree nor disagree	283	16.0	27.0	38.6
	Agree	484	27.4	46.1	84.7
	Strongly agree	161	9.1	15.3	100.0
	Total	1050	59.4	100.0	
Missing	Don't know / not applicable	219	12.4		
	System	499	28.2		
	Total	718	40.6		
Total		1768	100.0		

q37g. Senior administrators in my institution support open access publishing when publishing research results

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	46	2.6	4.1	4.1
	Disagree	145	8.2	12.9	17.0
	Neither agree nor disagree	345	19.5	30.7	47.8
	Agree	431	24.4	38.4	86.2
	Strongly agree	155	8.8	13.8	100.0
	Total	1122	63.5	100.0	
Missing	Don't know / not applicable	146	8.3		
	System	500	28.3		
	Total	646	36.5		
Total		1768	100.0		

q38mr. Which of the following information is required in proposals that your ethics committee considers? (Multiple Response)

		Frequency	% of respondents
Valid	How the number of participants / animals per experimental cohort was determined	125	74.9%
	How statistical power was determined	105	62.9%
	Whether participants / animals are to be randomly allocated to experimental cohorts	103	61.7%
	Whether inclusion or exclusion criteria will be applied	121	72.5%
	How dropouts / losses will be accounted for in the analysis plan	81	48.5%
	Whether outcome assessment will be blinded	84	50.3%
	Inclusion of positive and negative controls	78	46.7%
	Validation of tools or reagents such as antibodies, siRNAs, small molecules	69	41.3%
	None of the above	6	3.6%
	Don't know / can't say	7	4.2%
Number of Respondents		167	100.0%

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**q39mr. Which of the following information is routinely provided in proposals that your ethics committee considers?
(Multiple Response)**

		Frequency	% of respondents
Valid	How the number of participants / animals per experimental cohort was determined	119	71.7%
	How statistical power was determined	97	58.4%
	Whether participants / animals are to be randomly allocated to experimental cohorts	112	67.5%
	Whether inclusion or exclusion criteria will be applied	127	76.5%
	How dropouts / losses will be accounted for in the analysis plan	76	45.8%
	Whether outcome assessment will be blinded	76	45.8%
	Inclusion of positive and negative controls	77	46.4%
	Validation of tools or reagents such as antibodies, siRNAs, small molecules	60	36.1%
	None of the above	2	1.2%
	Don't know / can't say	5	3.0%
Number of Respondents		166	100.0%

q40mr. How are you assured about the quality of the design and methods for a project outlined in applications considered by your committee? (Multiple Response)

		Frequency	% of respondents
Valid	I trust the expertise of other members of the ethics committee	122	73.5%
	I have sufficient expertise to assess these aspects of an application	75	45.2%
	Independent external review	33	19.9%
	Independent internal (institutional) peer review	70	42.2%
	Peer review by a funding body	50	30.1%
	I assume these aspects of the applications are appropriate if they are before the committee	34	20.5%
	Other	11	6.6%
Number of Respondents		166	100.0%

q43mr. How does your institution offer / how have you received education and training about responsible research practices? (Multiple Response)

		Frequency	% of respondents
Valid	As part of undergraduate courses	431	28.5%
	As part of postgraduate courses	20	1.3%
	Training by supervisor / mentor	832	55.0%
	Mandatory institutional training (including induction and refresher training)	940	62.1%
	Non-mandatory institutional training (including induction and refresher training)	461	30.5%
	Ad hoc training	692	45.7%
	Attendance at external conferences / workshops etc.	671	44.3%
	My institution does not offer training	10	0.7%
	I don't need training	2	0.1%
	I have never received such training	70	4.6%
	Other	101	6.7%
Number of Respondents		1513	100.0%

q44. How frequently do you receive training about responsible research practices from your institution?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Only once as induction training	211	11.9	15.0	15.0
	More than once per year	239	13.5	17.0	32.0
	Once a year	355	20.1	25.2	57.2
	Once every 2 years	238	13.5	16.9	74.1
	Less often	364	20.6	25.9	100.0
	Total	1407	79.6	100.0	
Missing	System	361	20.4		
Total		1768	100.0		

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**q45mr. Education and training about responsible research practices is provided to...
(Multiple Response)**

		Frequency	% of respondents
Valid	Undergraduate students	31	37.8%
	Masters and PhD students	70	85.4%
	Early and mid-career researchers	69	84.1%
	Senior researchers	51	62.2%
	Research support staff	51	62.2%
	Human Research Ethics Committee members	49	59.8%
	Animal Ethics Committee members	42	51.2%
	Other	9	11.0%
Number of Respondents		82	100.0%

q46a. The educational and training opportunities available at my institution about responsible research practices are effective

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	41	2.3	3.0	3.0
	Disagree	181	10.2	13.3	16.3
	Neither disagree nor agree	422	23.9	31.1	47.4
	Agree	603	34.1	44.4	91.8
	Strongly agree	111	6.3	8.2	100.0
	Total	1358	76.8	100.0	
Missing	Don't know / Not applicable	148	8.4		
	System	262	14.8		
	Total	410	23.2		
Total		1768	100.0		

q46b. Education and training about responsible research practices is beneficial for my work / role

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	13	.7	.9	.9
	Disagree	40	2.3	2.7	3.6
	Neither disagree nor agree	169	9.6	11.6	15.2
	Agree	839	47.5	57.6	72.8
	Strongly agree	396	22.4	27.2	100.0
	Total	1457	82.4	100.0	
Missing	Don't know / Not applicable	49	2.8		
	System	262	14.8		
	Total	311	17.6		
Total		1768	100.0		

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q46c. Appropriately educating and training researchers about responsible research practices will improve research quality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	14	.8	.9	.9
	Disagree	50	2.8	3.4	4.3
	Neither disagree nor agree	131	7.4	8.8	13.2
	Agree	679	38.4	45.8	59.0
	Strongly agree	607	34.3	41.0	100.0
	Total	1481	83.8	100.0	
Missing	Don't know / Not applicable	25	1.4		
	System	262	14.8		
	Total	287	16.2		
Total		1768	100.0		

q47mr. When you write a report / paper about your research, which of the following do you specify? (Multiple Response)

		Frequency	% of respondents
Valid	How the number of participants / animals per experimental cohort was determined	876	69.5%
	How statistical power was determined	927	73.5%
	Whether participants / animals were randomly allocated to experimental cohorts	903	71.6%
	Whether inclusion or exclusion criteria were applied	974	77.2%
	How dropouts / losses were accounted for in the analysis plan	792	62.8%
	Whether outcome assessment was blinded	847	67.2%
	Inclusion of positive and negative controls	813	64.5%
	Validation of tools or reagents such as antibodies, siRNAs, small molecules	652	51.7%
	I have not yet written a report / paper about my research	15	1.2%
	None of the above	2	0.2%
	I do not specify any of the above as they are not relevant to my research	30	2.4%
	Don't know / can't say	12	1.0%
Number of Respondents		1261	100.0%

q48a. Reporting of study methods and procedures

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	56	3.2	4.9	4.9
	To a small extent	165	9.3	14.4	19.3
	To a moderate extent	433	24.5	37.8	57.1
	To a large extent	492	27.8	42.9	100.0
	Total	1146	64.8	100.0	
Missing	Don't know / not applicable	113	6.4		
	System	509	28.8		
	Total	622	35.2		
Total		1768	100.0		

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q48b. Adoption of practices to reduce bias (blinding, randomisation)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	74	4.2	6.9	6.9
	To a small extent	183	10.4	17.2	24.1
	To a moderate extent	390	22.1	36.6	60.7
	To a large extent	419	23.7	39.3	100.0
	Total	1066	60.3	100.0	
Missing	Don't know / not applicable	192	10.9		
	System	510	28.8		
	Total	702	39.7		
Total		1768	100.0		

q48c. Statistical analysis of studies

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	74	4.2	6.6	6.6
	To a small extent	211	11.9	18.9	25.5
	To a moderate extent	422	23.9	37.7	63.2
	To a large extent	411	23.2	36.8	100.0
	Total	1118	63.2	100.0	
Missing	Don't know / not applicable	141	8.0		
	System	509	28.8		
	Total	650	36.8		
Total		1768	100.0		

q48d. Reporting of reagents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	59	3.3	9.6	9.6
	To a small extent	149	8.4	24.3	33.9
	To a moderate extent	230	13.0	37.5	71.5
	To a large extent	175	9.9	28.5	100.0
	Total	613	34.7	100.0	
Missing	Don't know / not applicable	633	35.8		
	System	522	29.5		
	Total	1155	65.3		
Total		1768	100.0		

q48e. Reporting of animal models

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	55	3.1	10.2	10.2
	To a small extent	118	6.7	21.8	32.0
	To a moderate extent	190	10.7	35.1	67.1
	To a large extent	178	10.1	32.9	100.0
	Total	541	30.6	100.0	
Missing	Don't know / not applicable	706	39.9		
	System	521	29.5		
	Total	1227	69.4		
Total		1768	100.0		

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q48f. Increased data deposition in public repositories

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	146	8.3	14.9	14.9
	To a small extent	273	15.4	27.9	42.8
	To a moderate extent	307	17.4	31.4	74.2
	To a large extent	253	14.3	25.8	100.0
	Total	979	55.4	100.0	
Missing	Don't know / not applicable	278	15.7		
	System	511	28.9		
	Total	789	44.6		
Total		1768	100.0		

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q49. Have you ever been aware of other researchers feeling tempted or under pressure to compromise on research quality?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	805	45.5	53.6	53.6
	No	696	39.4	46.4	100.0
	Total	1501	84.9	100.0	
Missing	System	267	15.1		
Total		1768	100.0		

q50. Have you ever personally felt tempted or under pressure to compromise on research quality?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	344	19.5	27.5	27.5
	No	908	51.4	72.5	100.0
	Total	1252	70.8	100.0	
Missing	System	516	29.2		
Total		1768	100.0		

q51a. My department's / research group's expectations of researchers for obtaining external funding are reasonable

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	117	6.6	9.7	9.7
	Disagree	294	16.6	24.3	34.0
	Neither agree nor disagree	241	13.6	19.9	53.9
	Agree	498	28.2	41.2	95.0
	Strongly agree	60	3.4	5.0	100.0
	Total	1210	68.4	100.0	
Missing	Don't know / not applicable	42	2.4		
	System	516	29.2		
	Total	558	31.6		
Total		1768	100.0		

q51b. Pressure to obtain external funding has a negative effect on the quality of research in my department / research group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	69	3.9	5.8	5.8
	Disagree	246	13.9	20.7	26.4
	Neither agree nor disagree	250	14.1	21.0	47.4
	Agree	355	20.1	29.8	77.2
	Strongly agree	271	15.3	22.8	100.0
	Total	1191	67.4	100.0	
Missing	Don't know / not applicable	58	3.3		
	System	519	29.4		
	Total	577	32.6		
Total		1768	100.0		

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q52a. My department's / research group's expectations of researchers with respect to publishing are reasonable

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	54	3.1	4.4	4.4
	Disagree	161	9.1	13.2	17.6
	Neither agree nor disagree	204	11.5	16.7	34.3
	Agree	707	40.0	57.9	92.1
	Strongly agree	96	5.4	7.9	100.0
	Total	1222	69.1	100.0	
Missing	Don't know / not applicable	27	1.5		
	System	519	29.4		
	Total	546	30.9		
Total		1768	100.0		

q52b. The pressure to publish findings has a negative effect on the quality of research in my department / research group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	82	4.6	6.8	6.8
	Disagree	430	24.3	35.8	42.7
	Neither agree nor disagree	290	16.4	24.2	66.8
	Agree	283	16.0	23.6	90.4
	Strongly agree	115	6.5	9.6	100.0
	Total	1200	67.9	100.0	
Missing	Don't know / not applicable	43	2.4		
	System	525	29.7		
	Total	568	32.1		
Total		1768	100.0		

q52c. It is necessary to have a first authored publication in a prestigious journal (e.g. Cell, Nature, Science, NEJM, Lancet) when seeking an academic position or promotion

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	75	4.2	6.3	6.3
	Disagree	319	18.0	26.7	32.9
	Neither agree nor disagree	221	12.5	18.5	51.4
	Agree	351	19.9	29.3	80.8
	Strongly agree	230	13.0	19.2	100.0
	Total	1196	67.6	100.0	
Missing	Don't know / not applicable	52	2.9		
	System	520	29.4		
	Total	572	32.4		
Total		1768	100.0		

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q52d. I experience stress at the thought of my colleagues' assessment of my publication output

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	124	7.0	10.1	10.1
	Disagree	311	17.6	25.3	35.4
	Neither agree nor disagree	173	9.8	14.1	49.4
	Agree	392	22.2	31.9	81.3
	Strongly agree	230	13.0	18.7	100.0
	Total	1230	69.6	100.0	
Missing	Don't know / not applicable	15	.8		
	System	523	29.6		
	Total	538	30.4		
Total		1768	100.0		

q52e. Publication pressure leads some colleagues (whether intentionally or not) to cut corners

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	25	1.4	2.3	2.3
	Disagree	143	8.1	12.9	15.2
	Neither agree nor disagree	193	10.9	17.4	32.6
	Agree	475	26.9	42.9	75.5
	Strongly agree	271	15.3	24.5	100.0
	Total	1107	62.6	100.0	
Missing	Don't know / not applicable	139	7.9		
	System	522	29.5		
	Total	661	37.4		
Total		1768	100.0		

q53a. Making discoveries

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all competitive	14	.8	1.2	1.2
	Not that competitive	86	4.9	7.4	8.6
	Somewhat competitive	255	14.4	21.8	30.4
	Quite competitive	408	23.1	34.9	65.3
	Very competitive	405	22.9	34.7	100.0
	Total	1168	66.1	100.0	
Missing	Don't know / can't say	76	4.3		
	System	524	29.6		
	Total	600	33.9		
Total		1768	100.0		

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q53b. Applying for funding

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all competitive	1	.1	.1	.1
	Not that competitive	6	.3	.5	.6
	Somewhat competitive	11	.6	.9	1.5
	Quite competitive	86	4.9	6.9	8.4
	Very competitive	1134	64.1	91.6	100.0
	Total	1238	70.0	100.0	
Missing	Don't know / can't say	9	.5		
	System	521	29.5		
	Total	530	30.0		
Total		1768	100.0		

q53c. Applying for jobs and promotions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not that competitive	10	.6	.8	.8
	Somewhat competitive	93	5.3	7.6	8.4
	Quite competitive	353	20.0	28.7	37.1
	Very competitive	772	43.7	62.9	100.0
	Total	1228	69.5	100.0	
Missing	Don't know / can't say	19	1.1		
	System	521	29.5		
	Total	540	30.5		
Total		1768	100.0		

q53d. Gaining peer recognition

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all competitive	5	.3	.4	.4
	Not that competitive	47	2.7	3.8	4.3
	Somewhat competitive	223	12.6	18.2	22.5
	Quite competitive	502	28.4	41.0	63.5
	Very competitive	446	25.2	36.5	100.0
	Total	1223	69.2	100.0	
Missing	Don't know / can't say	24	1.4		
	System	521	29.5		
	Total	545	30.8		
Total		1768	100.0		

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q53e. Gaining public recognition

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all competitive	24	1.4	2.0	2.0
	Not that competitive	164	9.3	13.8	15.8
	Somewhat competitive	351	19.9	29.5	45.4
	Quite competitive	329	18.6	27.7	73.1
	Very competitive	320	18.1	26.9	100.0
	Total	1188	67.2	100.0	
Missing	Don't know / can't say	59	3.3		
	System	521	29.5		
	Total	580	32.8		
Total		1768	100.0		

q53f. Journal publication

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all competitive	6	.3	.5	.5
	Not that competitive	42	2.4	3.4	3.9
	Somewhat competitive	192	10.9	15.5	19.4
	Quite competitive	432	24.4	35.0	54.4
	Very competitive	563	31.8	45.6	100.0
	Total	1235	69.9	100.0	
Missing	Don't know / can't say	10	.6		
	System	523	29.6		
	Total	533	30.1		
Total		1768	100.0		

q54. What effect do you think that competition in research is having on the production of high quality research?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A very negative effect	259	14.6	20.3	20.3
	A negative effect	636	36.0	49.9	70.2
	No effect	62	3.5	4.9	75.1
	A positive effect	299	16.9	23.5	98.5
	A very positive effect	19	1.1	1.5	100.0
	Total	1275	72.1	100.0	
Missing	Don't know / can't say	224	12.7		
	System	269	15.2		
	Total	493	27.9		
Total		1768	100.0		

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q56. Have you experienced pressure from a research colleague to prove that his / her hypothesis was correct, even though the data you generated may not support the hypothesis?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	281	15.9	22.5	22.5
	No	917	51.9	73.5	96.1
	Don't know / can't say	49	2.8	3.9	100.0
	Total	1247	70.5	100.0	
Missing	System	521	29.5		
Total		1768	100.0		

q57. Has a research colleague ever asked you alter / suppress your results, or to select the best results which may not be representative of all the results?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	203	11.5	16.3	16.3
	No	1023	57.9	81.9	98.2
	Don't know / can't say	23	1.3	1.8	100.0
	Total	1249	70.6	100.0	
Missing	System	519	29.4		
Total		1768	100.0		

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E. Actions

q58a. The Excellence in Research for Australia (ERA) framework

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very negative effect overall	34	1.9	3.6	3.6
	Negative effect overall	150	8.5	15.9	19.5
	No effect overall	385	21.8	40.9	60.4
	Positive effect overall	342	19.3	36.3	96.7
	Very positive effect overall	31	1.8	3.3	100.0
	Total	942	53.3	100.0	
Missing	Don't know / can't say	502	28.4		
	System	324	18.3		
	Total	826	46.7		
Total		1768	100.0		

q58b. International and national University rankings

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very negative effect overall	61	3.5	4.9	4.9
	Negative effect overall	289	16.3	23.3	28.3
	No effect overall	472	26.7	38.1	66.4
	Positive effect overall	394	22.3	31.8	98.2
	Very positive effect overall	22	1.2	1.8	100.0
	Total	1238	70.0	100.0	
Missing	Don't know / can't say	203	11.5		
	System	327	18.5		
	Total	530	30.0		
Total		1768	100.0		

q58c. How funding for specific projects and programmes is awarded

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very negative effect overall	172	9.7	13.4	13.4
	Negative effect overall	502	28.4	39.0	52.4
	No effect overall	147	8.3	11.4	63.8
	Positive effect overall	412	23.3	32.0	95.9
	Very positive effect overall	53	3.0	4.1	100.0
	Total	1286	72.7	100.0	
Missing	Don't know / can't say	150	8.5		
	System	332	18.8		
	Total	482	27.3		
Total		1768	100.0		

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E. Actions

q58d. How multidisciplinary & collaborative research is supported

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very negative effect overall	96	5.4	7.5	7.5
	Negative effect overall	270	15.3	21.0	28.4
	No effect overall	216	12.2	16.8	45.2
	Positive effect overall	593	33.5	46.0	91.2
	Very positive effect overall	113	6.4	8.8	100.0
	Total	1288	72.9	100.0	
Missing	Don't know / can't say	151	8.5		
	System	329	18.6		
	Total	480	27.1		
Total		1768	100.0		

q58e. Support of open access publishing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very negative effect overall	28	1.6	2.2	2.2
	Negative effect overall	96	5.4	7.6	9.8
	No effect overall	486	27.5	38.4	48.1
	Positive effect overall	531	30.0	41.9	90.1
	Very positive effect overall	126	7.1	9.9	100.0
	Total	1267	71.7	100.0	
Missing	Don't know / can't say	174	9.8		
	System	327	18.5		
	Total	501	28.3		
Total		1768	100.0		

q58f. The grant peer review system

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very negative effect overall	178	10.1	13.7	13.7
	Negative effect overall	385	21.8	29.5	43.2
	No effect overall	149	8.4	11.4	54.6
	Positive effect overall	527	29.8	40.4	95.1
	Very positive effect overall	64	3.6	4.9	100.0
	Total	1303	73.7	100.0	
Missing	Don't know / can't say	139	7.9		
	System	326	18.4		
	Total	465	26.3		
Total		1768	100.0		

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E. Actions

q58g. The journal peer review system

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very negative effect overall	54	3.1	4.0	4.0
	Negative effect overall	202	11.4	14.9	18.9
	No effect overall	231	13.1	17.0	35.9
	Positive effect overall	776	43.9	57.3	93.2
	Very positive effect overall	92	5.2	6.8	100.0
	Total	1355	76.6	100.0	
Missing	Don't know / can't say	88	5.0		
	System	325	18.4		
	Total	413	23.4		
Total		1768	100.0		

q58h. Media coverage of research

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very negative effect overall	76	4.3	5.9	5.9
	Negative effect overall	301	17.0	23.4	29.3
	No effect overall	517	29.2	40.2	69.5
	Positive effect overall	355	20.1	27.6	97.1
	Very positive effect overall	37	2.1	2.9	100.0
	Total	1286	72.7	100.0	
Missing	Don't know / can't say	153	8.7		
	System	329	18.6		
	Total	482	27.3		
Total		1768	100.0		

q58i. How researchers are assessed for promotion during their careers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very negative effect overall	115	6.5	9.2	9.2
	Negative effect overall	433	24.5	34.5	43.6
	No effect overall	253	14.3	20.1	63.8
	Positive effect overall	419	23.7	33.4	97.1
	Very positive effect overall	36	2.0	2.9	100.0
	Total	1256	71.0	100.0	
Missing	Don't know / can't say	185	10.5		
	System	327	18.5		
	Total	512	29.0		
Total		1768	100.0		

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E. Actions

q58j. Provision of professional education, training and supervision

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very negative effect overall	11	.6	.8	.8
	Negative effect overall	64	3.6	4.9	5.8
	No effect overall	290	16.4	22.3	28.1
	Positive effect overall	785	44.4	60.4	88.5
	Very positive effect overall	149	8.4	11.5	100.0
	Total	1299	73.5	100.0	
Missing	Don't know / can't say	135	7.6		
	System	334	18.9		
	Total	469	26.5		
Total		1768	100.0		

q58k. Commercialisation of research

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very negative effect overall	71	4.0	6.2	6.2
	Negative effect overall	285	16.1	25.0	31.2
	No effect overall	378	21.4	33.1	64.3
	Positive effect overall	359	20.3	31.5	95.8
	Very positive effect overall	48	2.7	4.2	100.0
	Total	1141	64.5	100.0	
Missing	Don't know / can't say	292	16.5		
	System	335	18.9		
	Total	627	35.5		
Total		1768	100.0		

q58l. Ethical review processes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very negative effect overall	32	1.8	2.3	2.3
	Negative effect overall	94	5.3	6.9	9.2
	No effect overall	247	14.0	18.1	27.4
	Positive effect overall	756	42.8	55.5	82.8
	Very positive effect overall	234	13.2	17.2	100.0
	Total	1363	77.1	100.0	
Missing	Don't know / can't say	73	4.1		
	System	332	18.8		
	Total	405	22.9		
Total		1768	100.0		

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q58m. Research governance and contractual processes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very negative effect overall	75	4.2	5.9	5.9
	Negative effect overall	197	11.1	15.6	21.6
	No effect overall	352	19.9	27.9	49.4
	Positive effect overall	535	30.3	42.4	91.8
	Very positive effect overall	103	5.8	8.2	100.0
	Total	1262	71.4	100.0	
Missing	Don't know / can't say	176	10.0		
	System	330	18.7		
	Total	506	28.6		
Total		1768	100.0		

q58n. Initiatives that promote integrity in research, such as codes of conduct

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very negative effect overall	7	.4	.5	.5
	Negative effect overall	28	1.6	2.1	2.6
	No effect overall	283	16.0	20.9	23.5
	Positive effect overall	823	46.5	60.8	84.3
	Very positive effect overall	212	12.0	15.7	100.0
	Total	1353	76.5	100.0	
Missing	Don't know / can't say	82	4.6		
	System	333	18.8		
	Total	415	23.5		
Total		1768	100.0		

q58o. Data sharing policies

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very negative effect overall	7	.4	.5	.5
	Negative effect overall	43	2.4	3.4	3.9
	No effect overall	301	17.0	23.6	27.5
	Positive effect overall	744	42.1	58.2	85.7
	Very positive effect overall	183	10.4	14.3	100.0
	Total	1278	72.3	100.0	
Missing	Don't know / can't say	160	9.0		
	System	330	18.7		
	Total	490	27.7		
Total		1768	100.0		

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q58p. Monetary rewards for research achievements

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very negative effect overall	141	8.0	12.1	12.1
	Negative effect overall	320	18.1	27.4	39.4
	No effect overall	405	22.9	34.6	74.0
	Positive effect overall	265	15.0	22.6	96.7
	Very positive effect overall	39	2.2	3.3	100.0
	Total	1170	66.2	100.0	
Missing	Don't know / can't say	267	15.1		
	System	331	18.7		
	Total	598	33.8		
Total		1768	100.0		

q58q. Emphasis on publishing in top-tier journals

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very negative effect overall	182	10.3	13.7	13.7
	Negative effect overall	410	23.2	30.8	44.4
	No effect overall	218	12.3	16.4	60.8
	Positive effect overall	448	25.3	33.6	94.4
	Very positive effect overall	74	4.2	5.6	100.0
	Total	1332	75.3	100.0	
Missing	Don't know / can't say	106	6.0		
	System	330	18.7		
	Total	436	24.7		
Total		1768	100.0		

q59mr. Of the following, who has the largest potential to improve research quality (directly or indirectly)? (Multiple Response)

		Frequency	% of respondents
Valid	Funders	784	53.8%
	Publishers	373	25.6%
	Research group heads	672	46.1%
	Ethics committees	218	15.0%
	Department heads	200	13.7%
	Professional societies	127	8.7%
	Researchers	909	62.3%
	Research institutions	782	53.6%
	General public and politicians	97	6.7%
	None of the above	1	0.1%
	Don't know / can't say	6	0.4%
	Number of Respondents	1458	100.0%

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q60mr. Which of the following actions by funders do you think has the largest potential to improve research quality? (Multiple Response)

		Frequency	% of respondents
Valid	Providing guidance for training of researchers about research quality	681	46.9%
	Providing guidance for researchers on how to ensure research quality is addressed in grant applications	839	57.7%
	Ensuring grant application processes support submission and assessment of critical and relevant information	865	59.5%
	Ensuring appropriate training for peer review panel members about research quality	959	66.0%
	Encouraging open publishing practices e.g. data sharing, publishing openly (preprint servers, open access journals)	702	48.3%
	Providing a publishing platform for all research outputs	496	34.1%
	Providing public recognition of initiatives that ensure and promote research quality	496	34.1%
	Providing appropriate / increased / improved funding	93	6.4%
	Other	112	7.7%
	None of the above	17	1.2%
	Don't know / can't say	28	1.9%
Number of Respondents		1453	100.0%

q61mr. Which of the following actions by academic / research institutions do you think has the largest potential to improve research quality? (Multiple Response)

		Frequency	% of respondents
Valid	Providing appropriate education and training for researchers about research quality	1012	69.9%
	Requiring compliance with best practice for research design in ethics and grant applications and publications	859	59.3%
	Developing mentoring programs that address research quality as well as career development	1038	71.7%
	Rewarding researchers who perform high quality research	738	51.0%
	Conducting audits to ensure maintenance of record keeping and responsible research practice	588	40.6%
	Encouraging open publishing practices e.g. data sharing, publishing openly (preprint servers, open access journals)	686	47.4%
	Promoting an environment where high quality research and reproducible research is considered the required norm	1219	84.2%
	Providing increased funding / support	18	1.2%
	Other	82	5.7%
	None of the above	3	0.2%
	Don't know / can't say	16	1.1%
Number of Respondents		1448	100.0%

q62mr. Which of the following actions by researchers do you think has the largest potential to improve research quality? (Multiple Response)

		Frequency	% of respondents
Valid	Participation in appropriate education and training about research quality	874	60.3%
	Specifying critical research design elements (e.g. power analysis, bias avoidance, randomisation, blinding)	1035	71.4%
	Clearly distinguishing between discovery and hypothesis testing experiments	558	38.5%
	Obtaining statistical advice and developing a statistical plan before commencing a study	1002	69.2%
	Pre-registration of research protocols	535	36.9%
	Appropriate disclosures of interests including funding sources	747	51.6%
	Replication by outside research groups	540	37.3%
	Use of reporting checklists	652	45.0%
	Reporting exclusions	575	39.7%
	Open publishing practices e.g. data sharing, publishing openly (preprint servers, open access journals)	665	45.9%
	Other	70	4.8%
	None of the above	14	1.0%
	Don't know / can't say	22	1.5%
Number of Respondents		1449	100.0%

q63. Do you think that ensuring research quality adds to your workload?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No, not at all	269	15.2	19.2	19.2
	Yes, a little	423	23.9	30.3	49.5
	Yes, a moderate amount	427	24.2	30.5	80.0
	Yes, a large amount	279	15.8	20.0	100.0
	Total	1398	79.1	100.0	
Missing	Don't know / can't say	49	2.8		
	System	321	18.2		
	Total	370	20.9		
Total		1768	100.0		

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q64amr. Proposed research questions which are easy to answer rather than needed (Multiple Response)

		Frequency	% of respondents
Valid	No	539	48.0%
	Yes, I've done it myself	172	15.3%
	Yes, I've seen others do it	481	42.8%
Number of Respondents		1124	100.0%

q64bmr. Chosen an inadequate research design because it minimised costs (Multiple Response)

		Frequency	% of respondents
Valid	No	570	51.0%
	Yes, I've done it myself	184	16.5%
	Yes, I've seen others do it	445	39.8%
Number of Respondents		1117	100.0%

q64cmr. Used unsuitable measurement methods because they were readily available (Multiple Response)

		Frequency	% of respondents
Valid	No	664	60.3%
	Yes, I've done it myself	77	7.0%
	Yes, I've seen others do it	390	35.4%
Number of Respondents		1102	100.0%

q64dmr. Withheld information from a grant application that could have 'weakened' the application (Multiple Response)

		Frequency	% of respondents
Valid	No	699	67.0%
	Yes, I've done it myself	134	12.8%
	Yes, I've seen others do it	266	25.5%
Number of Respondents		1043	100.0%

q64emr. Stopped data collection earlier than planned, without the application of pre-planned monitoring and stopping rules, because the results were already statistically significant (Multiple Response)

		Frequency	% of respondents
Valid	No	908	87.5%
	Yes, I've done it myself	29	2.8%
	Yes, I've seen others do it	109	10.5%
Number of Respondents		1038	100.0%

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q65amr. Excluded outlying data before performing data analysis without disclosure (Multiple Response)

		Frequency	% of respondents
Valid	No	877	78.0%
	Yes, I've done it myself	41	3.6%
	Yes, I've seen others do it	230	20.5%
Number of Respondents		1124	100.0%

q65bmr. Selected the statistical method that provided the desired result (Multiple Response)

		Frequency	% of respondents
Valid	No	733	65.1%
	Yes, I've done it myself	95	8.4%
	Yes, I've seen others do it	342	30.4%
Number of Respondents		1126	100.0%

q65cmr. Performed data analyses not described in the study protocol without disclosure (Multiple Response)

		Frequency	% of respondents
Valid	No	803	77.7%
	Yes, I've done it myself	86	8.3%
	Yes, I've seen others do it	178	17.2%
Number of Respondents		1034	100.0%

q65dmr. Reported an incorrect downwardly rounded p-value (Multiple Response)

		Frequency	% of respondents
Valid	No	1059	94.5%
	Yes, I've done it myself	6	0.5%
	Yes, I've seen others do it	59	5.3%
Number of Respondents		1121	100.0%

q65emr. Incrementally added more data until the results became statistically significant (Multiple Response)

		Frequency	% of respondents
Valid	No	896	79.8%
	Yes, I've done it myself	76	6.8%
	Yes, I've seen others do it	183	16.3%
Number of Respondents		1123	100.0%

q65fmr. Concealed results that contradict earlier findings or hypotheses (Multiple Response)

		Frequency	% of respondents
Valid	No	972	85.1%
	Yes, I've done it myself	13	1.1%
	Yes, I've seen others do it	165	14.4%
Number of Respondents		1142	100.0%

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**q65gmr. Fabricated / falsified data to complete a project or paper
(Multiple Response)**

		Frequency	% of respondents
Valid	No	1066	93.5%
	Yes, I've done it myself	2	0.2%
	Yes, I've seen others do it	73	6.4%
Number of Respondents		1140	100.0%

**q66amr. Not attempted to publish a valid 'negative' or 'neutral' study
(Multiple Response)**

		Frequency	% of respondents
Valid	No	626	56.8%
	Yes, I've done it myself	275	24.9%
	Yes, I've seen others do it	299	27.1%
Number of Respondents		1103	100.0%

**q66bmr. Reported an unexpected finding as having been
hypothesised from the start (Multiple Response)**

		Frequency	% of respondents
Valid	No	809	73.6%
	Yes, I've done it myself	111	10.1%
	Yes, I've seen others do it	215	19.6%
Number of Respondents		1099	100.0%

**q66cmr. Not reported all study protocol stipulated results (Multiple
Response)**

		Frequency	% of respondents
Valid	No	860	82.3%
	Yes, I've done it myself	39	3.7%
	Yes, I've seen others do it	163	15.6%
Number of Respondents		1045	100.0%

**q66dmr. Selection of the best data for publication, rather than
representative data (Multiple Response)**

		Frequency	% of respondents
Valid	No	775	68.5%
	Yes, I've done it myself	82	7.2%
	Yes, I've seen others do it	313	27.7%
Number of Respondents		1132	100.0%

**q66emr. Use of other researchers' ideas or phrases without
permission or referencing (Multiple Response)**

		Frequency	% of respondents
Valid	No	906	79.3%
	Yes, I've done it myself	8	0.7%
	Yes, I've seen others do it	231	20.2%
Number of Respondents		1142	100.0%

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q66fmr. Not reported replication problems (Multiple Response)

		Frequency	% of respondents
Valid	No	908	86.9%
	Yes, I've done it myself	36	3.4%
	Yes, I've seen others do it	114	10.9%
Number of Respondents		1045	100.0%

q66gmr. Selective citation (Multiple Response)

		Frequency	% of respondents
Valid	No	628	57.7%
	Yes, I've done it myself	150	13.8%
	Yes, I've seen others do it	369	33.9%
Number of Respondents		1088	100.0%

q67amr. Insufficiently reported study flaws and limitations (Multiple Response)

		Frequency	% of respondents
Valid	No	712	63.7%
	Yes, I've done it myself	62	5.5%
	Yes, I've seen others do it	374	33.5%
Number of Respondents		1118	100.0%

q67bmr. Submitted or resubmitted a paper or grant application without consent from all authors (Multiple Response)

		Frequency	% of respondents
Valid	No	848	74.6%
	Yes, I've done it myself	37	3.3%
	Yes, I've seen others do it	261	23.0%
Number of Respondents		1137	100.0%

q67cmr. Duplication of a publication without disclosure (Multiple Response)

		Frequency	% of respondents
Valid	No	1055	92.7%
	Yes, I've done it myself	1	0.1%
	Yes, I've seen others do it	82	7.2%
Number of Respondents		1138	100.0%

q67dmr. Inappropriately added or omitted an author or contributor (Multiple Response)

		Frequency	% of respondents
Valid	No	746	65.2%
	Yes, I've done it myself	62	5.4%
	Yes, I've seen others do it	363	31.7%
Number of Respondents		1144	100.0%

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F. Current and past behaviours

q68amr. Modification of the results or conclusions of a study due to pressure of a sponsor / funder (Multiple Response)

		Frequency	% of respondents
Valid	No	1050	92.0%
	Yes, I've done it myself	8	0.7%
	Yes, I've seen others do it	87	7.6%
Number of Respondents		1141	100.0%

q68bmr. Failure to disclose a sponsor / funder of a study (Multiple Response)

		Frequency	% of respondents
Valid	No	1077	94.5%
	Yes, I've done it myself	3	0.3%
	Yes, I've seen others do it	61	5.4%
Number of Respondents		1140	100.0%

q68cmr. Failure to disclose a relevant financial or intellectual conflict of interest (Multiple Response)

		Frequency	% of respondents
Valid	No	1030	89.9%
	Yes, I've done it myself	2	0.2%
	Yes, I've seen others do it	116	10.1%
Number of Respondents		1146	100.0%

q68dmr. Refused to share data (that you have the rights to share) with bona fide colleagues (Multiple Response)

		Frequency	% of respondents
Valid	No	973	84.5%
	Yes, I've done it myself	10	0.9%
	Yes, I've seen others do it	172	14.9%
Number of Respondents		1151	100.0%

q68emr. Refused to respond to an allegation of a breach of research integrity (Multiple Response)

		Frequency	% of respondents
Valid	No	1038	94.1%
	Yes, I've done it myself	1	0.1%
	Yes, I've seen others do it	64	5.8%
Number of Respondents		1103	100.0%

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G. About you

q69. Are you:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	761	43.0	53.6	53.6
	Male	656	37.1	46.2	99.9
	X (Indeterminate / Intersex / Unspecified)	2	.1	.1	100.0
	Total	1419	80.3	100.0	
Missing	Prefer not to say	22	1.2		
	System	327	18.5		
	Total	349	19.7		
Total		1768	100.0		

q70. How old are you?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18 - 24 years	16	.9	1.1	1.1
	25 - 34 years	195	11.0	13.7	14.8
	35 - 44 years	373	21.1	26.1	40.9
	45 - 54 years	376	21.3	26.3	67.3
	55 - 64 years	330	18.7	23.1	90.4
	65 - 74 years	116	6.6	8.1	98.5
	75 years or older	21	1.2	1.5	100.0
	Total	1427	80.7	100.0	
Missing	Prefer not to say	17	1.0		
	System	324	18.3		
	Total	341	19.3		
Total		1768	100.0		

q71. How many years have you been working in research / your role / as a member or Chair of the ethics committee?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 3 years	160	9.0	11.2	11.2
	3 to 10 years	375	21.2	26.2	37.4
	More than 10 years	896	50.7	62.6	100.0
	Total	1431	80.9	100.0	
Missing	Prefer not to say	9	.5		
	System	328	18.6		
	Total	337	19.1		
Total		1768	100.0		

q72. What type of institution are you primarily associated with?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	University	906	51.2	62.7	62.7
	Hospital	142	8.0	9.8	72.6
	Research institute	355	20.1	24.6	97.2
	Company	9	.5	.6	97.8
	Other	32	1.8	2.2	100.0
	Total	1444	81.7	100.0	
Missing	System	324	18.3		
Total		1768	100.0		

2019 Survey of research culture in NHMRC-funded institutions - Overall results
 G. About you

q73. How many members are in your research group?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 to 5 members	279	15.8	23.3	23.3
	6 to 10 members	403	22.8	33.7	57.1
	11 to 25 members	371	21.0	31.0	88.1
	26 to 50 members	94	5.3	7.9	96.0
	More than 50 members	48	2.7	4.0	100.0
	Total	1195	67.6	100.0	
Missing	System	573	32.4		
	Total	1768	100.0		