Untidy Data

Data Tidying

Common Problems with Messy Data Sets

- 1. Column headers are values but should be variable names.
- 2. A single column has multiple variables.
- 3. Variables have been entered in both rows and columns.
- 4. Multiple "types" of data are in the same spreadsheet.
- 5. A single observation is stored across multiple spreadsheets.

Δ

	A	В	С	D	E	F
1						
2		101	102	103	104	105
3	sex	Male	Female	Male	Male	Male
4						
5		101	102	103	104	105
6	glucose	134.1	120.0	124.8	83.1	105.2
7						
8		101	102	103	104	105
9	insulin	0.60	1.18	1.23	1.16	0.73

C

	A	В	С	D	E	F	G
1							
2	Date	11/3/14					
3	Days on diet	126					
4	Mouse #	43					
5	sex	f					
6	experiment		values			mean	SD
7	control		0.186	0.191	1.081	0.49	0.52
8	treatment A		7.414	1.468	2.254	3.71	3.23
9	treatment B		9.811	9.259	11.296	10.12	1.05
10							
11	fold change		values			mean	SD
12	treatment A		15.26	3.02	4.64	7.64	6.65
13	treatment B		20.19	19.05	23.24	20.83	2.17

В

	Α	В	С	D	E	F	G
1	1MIN						
2			Normal			Mutant	
3	B6	146.6	138.6	155.6	166	179.3	186.9
4	BTBR	245.7	240	243.1	177.8	171.6	188.1
5							
6	5MIN						
7			Normal			Mutant	
8	В6	333.6	353.6	408.8	450.6	474.4	423.8
9	BTBR	514.4	610.6	597.9	412.1	447.4	446.5

D

	Α	В	С	D	E	F
1		GTT date	GTT weight	time	glucose mg/dl	insulin ng/m
2	321	2/9/15	24.5	0	99.2	lo off curve
3				5	349.3	0.205
4				15	286.1	0.129
5				30	312	0.175
6				60	99.9	0.122
7				120	217.9	lo off curve
8	322	2/9/15	18.9	0	185.8	0.251
9				5	297.4	2.228
10				15	439	2.078
11				30	362.3	0.775
12				60	232.7	0.5
13				120	260.7	0.523
14	323	2/9/15	24.7	0	198.5	0.151
15				5	530.6	off curve lo

Total participants 292 1,058 1 465 1,653 1,515 1,516 1,710 1,730 1,77	2,4											
Table 5 Participation by Federal Electoral Division(a), Males and Age Gender apartheid	1,5							7	rvey, 201	w Postal S	an Marriage La	1800.0 Australi
Total participants	1,5										ember 2017	Released on 15 Nov
Total participants 18.19 years 29.24 years 25.29 years 30.34 years 30.34 years 30.34 years 50.49 years 50.49 years 50.59 y	1, 2,					theid	nder apar	d Age Ger	(a), <mark>Males a</mark>	toral Division	on by Federal Elec	Table 5 Participation
Lingia C Eligible participants 572 2,910 3,789 3,996 3,607 3,506 3,645 3,331 2,9	2,	55-59 years	50-54 years	45-49 years	40-44 years	35-39 years	30-34 years	25-29 years	20-24 years	18-19 years	NA	Yeah
Primary keyno Padicipation rate (%) 51.0 36.4 38.7 41.4 42.0 43.2 46.9 51.9 55.5		1,753	1,730	1,710	1,516	1,515	1,653	1.465	1,058	292	Total participants	
Merged cells Solomon	6	2,960	3,331	3,645	3,506	3,607	3,996	3,789	2,910	572	Eligible participants	Lingiar(c)
Merged cells Solomon	+ '	59.2	51.9	46.9	43.2	42.0	41.4			51.0	Participation rate (%)	rimary keyno
Solomon Bigible participants 750 2,991 3,994 4,155 3,634 3,398 3,427 3,066 2,994 4,155 3,634 3,398 3,427 3,066 2,994 4,155 3,634 3,398 3,427 3,066 2,994 3,994 4,155 3,634 3,398 3,427 3,066 2,994 3,994 4,155 3,634 3,398 3,427 3,066 2,994 3,994 3,994 4,155 3,634 3,398 3,427 3,066 2,994 3,994	4	2 124	2.100	2 224	2.057	2 100	2 257			440	1	
Total participants 734 2,519 3,531 4,010 3,703 3,573 3,934 3,838 3,8					-1							-
Northern Territory (Total) Total participants 1,322 5,901 7,783 8,151 7,241 6,904 7,072 6,397 5,8 7,783 8,151 7,241 6,904 7,072 6,397 5,8 7,783 8,151 7,241 6,904 7,072 6,397 5,8 7,783 8,151 7,241 6,904 7,072 6,397 5,8 7,783 8,151 7,241 6,904 7,072 6,397 5,8 7,80 7,072 6,397 5,8 7,000		72.8	The second secon									SOUTION
Covariate as Subheading Covariate as Sub		12.0	00.0	64.9	60.5	60.2	30.7	51.7	40.0	50.9	articipation rate (%)	
Australian Capital Fernitory (Total) Eligible participants 1,322 5,901 1,765 42.7 45.4 49.2 51.1 51.8 55.6 60.0 66	3,	3,887	3,838	3,934	3,573	3,703	4,010	3,531	2,519	734	Total participants	
Participation rate (%) 55.5 42.7 45.4 49.2 51.1 51.8 55.6 60.0 66	4,	5,891	6,397	7,072	6,904	7,241	8,151	7,783	5,901	1,322	Eligible participants	
Total participants 1,764 4,789 4,817 4,973 4,626 4,453 5,074 4,826 5,18	6	66.0	60.0	55.6	51.8	51.1	49.2	45.4	42.7	55.5	Participation rate (%)	
Canberra(d) Eligible participants 2,260 6,471 6,448 6,509 5,983 5,805 6,302 5,902 6,0 Participation rate (%) 78.1 74.0 74.7 76.4 77.3 76.7 80.5 81.8 85 Fenner(e) Eligible participants 1,477 4,687 5,178 5,786 6,025 5,463 5,191 4,208 3,9 Fenner(e) Eligible participants 1,904 6,354 7,121 7,822 7,960 7,155 6,480 5,206 4,6 Participation rate (%) 77.6 73.8 72.7 74.0 75.7 76.4 80.1 80.8 84 NA Yeah						7.47745.00						Territory Divisions
Participation rate (%) 78.1 74.0 74.7 76.4 77.3 76.7 80.5 81.8 85		5,169							- Contraction of the Contraction			
Total participants 1,477 4,687 5,178 5,786 6,025 5,463 5,191 4,208 3,9		6,044				- Annual Control						
Fenner(e) Eligible participants 1,904 6,354 7,121 7,822 7,960 7,155 6,480 5,206 4,66 Participants 77.6 73.8 72.7 74.0 75.7 76.4 80.1 80.8 84 Section 80.1 80.8 Section 80.1 80.8 Section 80.8 84 Section 80.1 80.8 Section 80.1 80.8 Section 80.1 80.8 Section 80.1 80.8 Section 80	8	85.5	81.8	80.5	76.7	77.3	76.4	74.7	74.0	78.1	Participation rate (%)	
Fenner(e) Eligible participants 1,904 6,354 7,121 7,822 7,960 7,155 6,480 5,206 4,66 Participants 77.6 73.8 72.7 74.0 75.7 76.4 80.1 80.8 84 Section 10,203 10,755 10,001 10,203 10,755 Australian Capital Eligible participants 4,164 12,825 13,569 14,331 13,943 12,960 12,782 11,108 10,775 Participation rate (%) 77.8 73.9 73.7 75.1 76.4 76.5 80.3 81.3 84 Australia Total participants 151,297 438,166 441,658 460,548 462,206 479,360 524,620 517,693 543,44 Fenner(e) Eligible participants 1,904 6,354 7,121 7,822 7,960 7,155 6,480 5,206 4,66 Rotal participants 1,904 6,354 7,121 7,822 7,960 7,155 6,480 5,206 4,66 Rotal participants 1,904 1,905 10,757 10,001 1,905 10,001 10,203 10,001 Rotal participants 1,904 12,825 13,569 14,331 13,943 12,960 12,782 11,108 10,77 Rotal participants 1,904 12,825 13,569 14,331 13,943 12,960 12,782 11,108 10,77 Rotal participants 1,904 12,825 13,569 14,331 13,943 12,960 12,782 11,108 10,77 Rotal participants 1,904 12,825 13,569 14,331 13,943 12,960 12,782 11,108 10,77 Rotal participants 1,904 12,825 13,569 14,331 13,943 12,960 12,782 11,108 10,77 Rotal participants 1,904 12,825 13,569 14,331 13,943 12,960 12,782 11,108 10,77 Rotal participants 1,904 12,825 13,569 14,331 13,943 12,960 12,782 11,108 10,77 Rotal participants 1,904 12,825 13,569 14,331 13,943 12,960 12,782 11,108 10,77 Rotal participants 1,904 12,825 13,569 14,331 13,943 12,960 12,782 11,108 10,77 Rotal participants 1,904 12,825 13,569 14,331 13,943 12,960 12,782 11,108 10,77 Rotal participants 1,904 12,825 13,569 14,331 13,943 12,960 12,782 11,108 10,77 Rotal participants 1,904 12,825 13,569	3.	3,948	4.208	5.191	5.463	6.025	5.786	5.178	4.687	1.477	Total participants	
Participation rate (%) 77.6 73.8 72.7 74.0 75.7 76.4 80.1 80.8 84	3,9	4,692	5,206	6,480	7.155	7,960	7.822	7.121	6.354	1,904		
Australian Capital Territory (Total) Total participants 151,297 438,166 441,658 460,548 462,206 479,360 524,620 517,693 543,44 5,14		84.1						72.7				
Australia Capital Eligible participants 4,164 12,825 13,569 14,331 13,943 12,960 12,782 11,108 10,77 12,782 11,108 10,77 12,782 11,108 10,77 12,782 11,108 10,77 12,782 11,108 10,77 12,782												
Territory (Total)	7,0	9,117										Australian Canital
Australia Total participants 151,297 438,166 441,658 460,548 462,206 479,360 524,620 517,693 543,4		10,736										Territory (Total)
Total participants 151,297 438,166 441,658 460,548 462,206 479,360 524,620 517,693 543,4	8	84.9	81.3	80.3	76.5	76.4	75.1	73.7	73.9	77.8	Participation rate (%)	2 2 2
The property of the property o												Australia
Total Eligible participants 201,439 635,909 646,916 665,250 656,446 660,841 693,850 659,150 664,7	506,	543,449	517,693	524,620	479,360	462,206	460,548	441,658	438,166	151,297	Total participants	
	597,3	664,720	659,150	693,850	660,841	656,446	665,250	646,916	635,909	201,439	Eligible participants	
Participation rate (%) 75.1 68.9 68.3 69.2 70.4 72.5 75.6 78.5 81	8	81.8	78.5	75.6	72.5	70.4	69.2	68.3	68.9	75.1	Participation rate (%)	
									047		I Di I I	
a) The Federal Electoral Divisions are current as at 24 August 2017						n le	a desired a desired			as at 24 August		
(b) Includes those whose age is unknown Return of the table junk						nk	e table ju	urn of the	Ret	Marker Viete		
(c) Includes Christmas Island and the Cocos (Keeling) Islands	-									Reeling) Islands		AND RESIDENCE OF THE PROPERTY
(d) Includes Norfolk Island (e) Includes Jervis Bay	_											

Clinic Name	Clinic Location	Address	Contact Number	Operational H		Services
				Drop-in	By Appointment	
irth Control and Sexual Health Centre	Dufferin St./Lawrence Ave. W.	Suite 403, 960 Lawrence Ave. W., Toronto, On M6A 3B5			Monday: 2 pm - 5 pm	Birth control counselling
			Merge	d column heading!	Tuesday: 4 pm - 7 pm	Low cost or free birth control
		_			Wednesday: 12 noon - 5 pm	Free condoms
		C	olumn hea	dings on the second row!	Thursday: 5 pm - 8 pm	Plan B (emergency contraceptive pill)
				3-	Friday: 12:30 pm - 4:30 pm	STI testing and free treatment
						HIV testing
				Δ	ttributes spanning	Pregnancy testing, counselling and referral
Name of Jordanne		ll		^	tiributes sparifiling	Sexuality and relationship counselling
Names/address	es across multiple	# IInes		mı	Iltiple rows, without	Anonymous HIV testing (including the rapid HIV test)
						Perongrisous Fire teating (monuting the rapid Fire teat)
lack Creek Community Health Centre	Jane St./Wilson Ave.	North York Sheridan Mall, Unit 5	416-249-8000	Tuesday: 4 pm - 6 pm th	e. LD _v (clinic name)	Birth control counselling
Sheridan Mall Site)	June Gerrmaon rive.	2202 Jane St., Toronto, On M2M 1A4	410 240 0000			Low cost or free birth control
Sheridan Mali Site)		2202 Jane St., Toronto, On Walkin 1A4		a	lso spanning! Not	Free condoms
					tidy 🖀	Plan B (emergency contraceptive pill)
						STI testing and free treatment
						HIV testing
						Pregnancy testing, counselling and referral
						Sexuality and relationship counselling
lack Creek Community Health Centre	Jane St./Finch Ave. W.	1 York Gate Blvd., Toronto, On M3N 3A1	416-246-2388	Wednesday: 1 pm - 4:30 pm		Birth control counselling
Yorkgate mall Site)						Low cost or free birth control
						Free condoms
						Plan B (emergency contraceptive pill)
						STI testing and free treatment
						HIV testing and free treatment
						Pregnancy testing, counselling and referral
						Sexuality and relationship counselling
Special Treatment Clinic	Bay St./College St.	8th Floor, 790 Bay St., Toronto, On M5G 1N8	416-351-3800 ext 2	207		Birth control counselling
						Low cost or free birth control
				Tuesday: 5 pm - 7 pm		Free condoms
				Wednesday: 5 pm - 7 pm NA NA		Plan B (emergency contraceptive pill)
				Thursday: 5 pm - 7 pm		STI testing and free treatment
						HIV testing
						Pregnancy testing, counselling and referral
						Sexuality and relationship counselling
Taibu Community Health Center	Neilson Rd./McLevin Ave.	27 Tapscott Rd., Toronto, On M1B 4Y7	416-644-3536			Birth control counselling
						Low cost or free birth control
						Free condoms
						Plan B (emergency contraceptive pill)
						STI testing and free treatment
						HIV testing
				<u> </u>		Pregnancy testing, counselling and referral
				NA NA NA NA		Sexuality and relationship counselling
				IVA IVA IVA IVA	1	
The Talk Shop	Yonge St./Empress Ave.	5110 Yonge St., Toronto, On M2N 6M1	416-338-7000			Birth control counselling
The Talk Office	ronge descripted nie.	orrorongo ot, fotolito, Oli Mari Oli I	710 000-7000			Low cost or free birth control
				Monday: 2 pm - 6:30 pm		Free condoms
				Wednesday: 9:30 am - 11:30 am, 1 pm - 3:30 pm		Plan B (emergency contraceptive pill)
				Thursday: 2 pm - 6:30 pm		STI testing and free treatment
						HIV testing
						Pregnancy testing, counselling and referral
						Sexuality and relationship counselling
						Rapid HIV testing
	N.	IA KIA KIA KI	٨			
	- 1	IA NA NA NA				
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						1 N I N N I N
						NA NA
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D

	A	В	С	D	E	F
1		GTT date	GTT weight	time	glucose mg/dl	insulin ng/ml
2	321	2/9/15	24.5	0	99.2	lo off curve
3				5	349.3	0.205
4				15	286.1	0.129
5				30	312	0.175
6				60	99.9	0.122
7				120	217.9	lo off curve
8	322	2/9/15	18.9	0	185.8	0.251
9				5	297.4	2.228
10				15	439	2.078
11				30	362.3	0.775
12				60	232.7	0.5
13				120	260.7	0.523
14	323	2/9/15	24.7	0	198.5	0.151
15				5	530.6	off curve lo

A

	Α	В	С
1	id	GTT date	GTT weight
2	321	2/9/15	24.5
3	322	2/9/15	18.9
4	323	2/9/15	24.7

В

	Α	В	С	D	E
1	id	GTT time	glucose mg/dl	insulin ng/ml	note
2	321	0	99.2	NA	insulin below curve
3	321	5	349.3	0.205	
4	321	15	286.1	0.129	
5	321	30	312	0.175	
6	321	60	99.9	0.122	
7	321	120	217.9	NA	insulin below curve
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14	323	0	198.5	0.151	
15	323	5	530.6	NA	insulin below curve