**A note on the data**

There are 667 unique cases in the sample. Only 479 course grades are available because not all universities were prepared to share grade result. The survey was administered in class in paper form. An online version was also available. The sample is social science undergraduates who were undertaking general courses in introductory statistics across twelve UK universities. There were a number of iterations of the survey questionnaire issued. A version summary and a record of their distribution is available in the Codebook file. The survey questionnaire was based on a previous survey undertaken by Payne et al. (2009) available from the UK data archive, Student Perceptions and Experiences of Quantitative Methods, 2006. [data collection]. UK Data Service. SN: 6173, DOI: <http://doi.org/10.5255/UKDA-SN-6173-1>.

The university names have been removed from the data. These are variables *Uniname*, *Uninum* and *Uni*. The dataset was generated using Stata version 18.0. A summary of the dataset is provided below.

Variable Obs Unique Mean Min Max Label

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ID 677 677 . . . URN

Uniname 677 15 . . . What university are you enrolled in? (please write in)

Q\_Type 677 8 . . . Type of questionnaire used

Calm 671 4 2.66766 1 4 I feel calm

Worry 414 4 2.683575 1 4 I worry too much over something that really does not matter

Secure 415 4 2.783133 1 4 I feel secure

Tension 414 4 2.369565 1 4 I get in a state of tension or turmoil as I think over my recent concerns...

Nervous 412 4 2.191748 1 4 I feel nervous and restless

Decisions 415 4 2.306024 1 4 I make decisions easily

Pass\_ALevel 397 2 .6523929 0 1 Did your most recent qualification include passes in any of the following...

Pass\_BTEC 184 2 .0815217 0 1

Pass\_AFoun~n 184 2 .2173913 0 1

Pass\_Bacca~t 212 2 .2075472 0 1

Pass\_Irish~g 177 2 .0056497 0 1

Pass\_Scott~h 177 2 .2824859 0 1

Pass\_HNC\_D 70 2 .0571429 0 1

Pass\_Degree 179 2 .0837989 0 1

Pass\_Other 677 31 . . . If you selected Other, please specify:

Pass\_Art 214 2 .2523364 0 1 Did your most recent qualification include passes in any of the following...

Pass\_Bio 296 2 .5 0 1

Pass\_Chem 259 2 .3552124 0 1

Pass\_CompSci 191 2 .1099476 0 1

Pass\_DT 192 2 .078125 0 1

Pass\_English 336 2 .7172619 0 1

Pass\_Geog 396 2 .5984848 0 1

Pass\_History 297 2 .5892256 0 1

Pass\_IT 190 2 .0894737 0 1

Pass\_Maths 325 2 .6092308 0 1

Pass\_Media 202 2 .1435644 0 1

Pass\_MFL 255 2 .4627451 0 1

Pass\_Philo~y 229 2 .3056769 0 1

Pass\_Physics 220 2 .2090909 0 1

Pass\_Polit~s 227 2 .3524229 0 1

Pass\_Psyc 239 2 .5188285 0 1

Pass\_Soc 250 2 .452 0 1

Other 677 11 . . . If you selected Other, please specify:

A\_Level\_Ma~s 670 3 .641791 0 2 Do you have a pass in A-Level or Higher in maths, or equivalent?

GCSE\_Maths 664 3 .189759 0 2 Do you have a high school level qualification in maths below the universi...

Gd\_Maths 668 3 .1571856 -1 1 On the whole I am good at maths

Bad\_experi~e 669 3 -.2541106 -1 1 I had a bad experience of maths at school

Eval\_Grades 274 3 .959854 0 2 Which of the following statements would you say most applies to how you f...

Study\_Stra~y 668 4 .8952096 0 3 Which of the following statements would you say most applies to you when ...

Pref\_Essay 670 3 .4373134 -1 1 I would rather write an essay than analyse data

Pref\_Seminar 665 3 .3609023 -1 1 I would rather attend a discussion seminar than a computer lab

Pref\_Exams 670 3 -.4701493 -1 1 I prefer exams to coursework

Arts\_v\_Sci~e 662 11 4.349698 1 10 Do you see your main degree subject as closer to Arts/Humanities or Scien...

Studied\_St~s 669 3 .5336323 0 2 Have you ever studied statistics before? Maybe at school college, or anyw...

Learn\_Anxi~s 665 3 .0962406 -1 1 The idea of learning statistics makes me feel anxious

Value\_Stats 669 3 .3303438 -1 1 Learning about statistics is important for my future employment

No\_Trust\_S~s 670 3 -.3671642 -1 1 On the whole, you can't trust statistics

Gap\_Prob 669 5 3.056801 1 5 Problems getting through statistics

Sec\_Maths 666 5 2.106607 1 5 How can I possibly do statistics

Never\_Enjoy 667 5 2.542729 1 5 How can I enjoy statistics

Not\_Brains 665 5 2.35188 1 5 Not enough brains to get through statistics

Enjoy\_Too\_~s 665 5 2.557895 1 5 Could enjoy statistics if not so mathmatical

NBad\_Too\_M~s 667 5 2.586207 1 5 Its just too mathematical

Too\_Slow 667 5 2.493253 1 5 Too slow to get through statistics

Heads 525 5 1.251429 0 4 If you toss a coin twice what is the chance of getting heads both times?

Algebra 535 4 2.029907 1 5 3x + 4 = 10 what is the value of x?

Order\_Num 531 2 .645951 0 1 Order the following numbers from least to greatest

Year 532 4 1.515038 1 4 What year of university are you currently in?

Age 669 32 20.75785 17 59 Please tell us your age at your last birthday

Gender 665 3 .7578947 0 2 Sex

Uni 677 15 . . . What university are you enrolled in? (please write in)

Grade 479 166 67.20814 0 94

Degree 677 153 . . . What is your main degree subject?

Exam\_Study 534 5 3.604869 1 5 Studying for an examination in a statistics course

Ask\_Help\_I~y 532 5 2.772556 1 5 Going to ask my statistics teacher for individual help with material I am...

Order\_Coun~m 478 6 3.903766 0 5 Order the following numbers from least to greatest, 05., 0.06, 0.33, 3/5,...

Comp\_Cw 534 5 3.191011 1 5 Doing the coursework for a statistics course

Read\_Journal 532 5 2.62218 1 5 Reading a journal article or book chapter that includes some statistical ...

Pick\_Analy~s 532 5 3.387218 1 5 Trying to decide which analysis is appropriate for my research project

Take\_Exam 532 5 3.710526 1 5 Doing an examination in a statistics course

Room\_Test 533 5 3.553471 1 5 Walking into the room to take a statistics test

Diff\_Answer 525 5 3.39619 1 5 Finding that another student in class got a different answer than I did t...

Test\_Morning 524 5 3.293893 1 5 Waking up in the morning on the day of a statistics test

Ask\_Help\_O~t 527 5 2.626186 1 5 Asking one of your lecturers for help in understanding a statistical output

Odds 525 5 2.567619 1 5 Trying to understand the odds in the lottery

Student\_Ou~t 527 5 2.804554 1 5 Watching a student search through a load of computer outputs from his/her...

Ask\_Help\_Lab 525 5 2.478095 1 5 Asking someone in the computer lab for help in understanding an output

Enrol\_Course 527 5 2.814042 1 5 Enrolling in a statistics course

Exam\_Mark 527 5 2.908918 1 5 Going over a final examination in statistics after it has been marked

Ask\_Help\_S~t 527 5 2.206831 1 5 Asking a fellow student for help in understanding an output

Position\_0\_5 355 5 3.132394 1 5 Position number given for ordering numbers

Position\_~06 357 5 1.215686 1 5 Position number given for ordering numbers

Position~330 356 4 2.087079 1 4 Position number given for ordering numbers

Position\_0\_6 355 5 3.921127 1 5 Position number given for ordering numbers

Position\_~66 355 5 4.630986 1 5 Position number given for ordering numbers

Risks 94 10 5.478723 1 10 Do you quite enjoy taking risks or do you tend to play things safe?

Degree\_Area 94 4 1.382979 1 4 Is the degree you're studying in...

I\_am\_Tense 256 4 2.359375 1 4 How often do you generally feel this way...

I\_feel\_upset 255 4 1.898039 1 4 How often do you generally feel this way...

I\_am\_Relaxed 256 4 2.476563 1 4 How often do you generally feel this way...

I\_feel\_con~t 255 4 2.635294 1 4 How often do you generally feel this way...

I\_am\_worried 256 5 2.5625 1 5 How often do you generally feel this way...

Guess\_Av\_M~k 132 6 11.30303 1 999 At a rough guess, which of the following best represents your overall ave...

STARS\_F4 652 29 17.76074 7 35 �Score on Computation Self-Concept (7-35)�

Av\_S\_F4 652 29 2.537248 1 5 Average STARS score for Factor 4

Ord\_0\_5\_co~t 355 2 .8619718 0 1 Correct answer of numbered position

Ord\_0\_06\_c~t 357 2 .9243697 0 1 Correct answer of numbered position

Ord\_0\_330\_~t 356 2 .8932584 0 1 Correct answer of numbered position

Ord\_0\_6\_Co~t 355 2 .7943662 0 1 Correct answer of numbered position

Ord\_0\_66\_c~t 355 2 .8197183 0 1 Correct answer of numbered position

Sum\_order\_~t 354 6 4.29661 0 5 Total number of right ordered answers

Heads\_Corr~t 525 2 .5980952 0 1 Correct answer of heads

Algebra\_Co~t 535 2 .9626168 0 1 Correct answer of equation

Total\_Math~R 516 4 2.215116 0 3 Number of maths questions right

STARS\_F2 520 17 11.39808 4 20 �Score on Interpretation Anxiety (4-20)�

STARS\_F3 515 33 26.51068 8 40 �Score on Test and Class Anxiety (8-40)�

STARS\_F5 521 17 10.10173 4 20 �Score on Fear of Asking for Help (4-20)�

Total\_STARS 491 87 65.64969 23 115 Total STARS score

Av\_S\_F3 515 33 3.313835 1 5 Average STARS score for Factor 3

Av\_S\_F5 521 17 2.525432 1 5 Average STARS score for Factor 5

Uninum 677 15 7.512555 1 15 What university are you enrolled in? (please write in)

traitanx 677 23 14.18848 0 24

Ztraitanx 671 22 1.40e-15 -2.226087 2.592659 Zscore(traitanx)

grade1 46 32 57.82609 26.5 79

grade2 95 78 59.12 26.4 78.5

grade3 5 5 56.2 47 60

grade4 24 18 69.625 51 82

grade5 40 20 82.525 0 94

grade6 34 25 76.70588 50 91

grade7 27 24 69.5963 54.3 81.7

grade8 63 32 76.60317 40 94

grade9 91 31 63.02198 35 84

grade10 5 4 59.6 45 68

grade11 19 14 78.8 54.3 92.9

grade12 7 6 56.42857 49 67

grade13 13 10 64.76923 55 76

grade15 10 8 58.3 42 75

Zgrade1 677 33 5.71e-17 -2.321958 1.569457 Zscore(grade1)

Zgrade2 677 79 1.33e-16 -3.324191 1.968912 Zscore(grade2)

Zgrade3 677 6 -4.18e-18 -1.748026 .7220108 Zscore(grade3)

Zgrade4 677 19 0 -2.638997 1.753428 Zscore(grade4)

Zgrade5 677 21 -7.82e-17 -5.498229 .7645221 Zscore(grade5)

Zgrade6 677 26 -5.03e-17 -2.30885 1.235794 Zscore(grade6)

Zgrade7 677 25 1.30e-16 -2.153234 1.703818 Zscore(grade7)

Zgrade8 677 33 -4.40e-17 -3.511388 1.668899 Zscore(grade8)

Zgrade9 677 32 9.29e-17 -2.724885 2.039924 Zscore(grade9)

Zgrade10 677 5 -8.20e-19 -1.390161 .7998187 Zscore(grade10)

Zgrade11 677 15 -3.61e-17 -2.806448 1.615139 Zscore(grade11)

Zgrade12 677 7 7.01e-18 -1.014485 1.443691 Zscore(grade12)

Zgrade13 677 11 -1.28e-17 -1.453209 1.670618 Zscore(grade13)

Zgrade15 677 9 4.02e-18 -1.61738 1.65707 Zscore(grade15)

zgradeall 604 307 20.66142 -3.511388 99

filter\_\_ 478 1 0 0 0 zgradeall = 0 (FILTER)

mathqual 677 4 3.626292 0 99

negstat 671 13 .0242176 -1 1

mathdum1 677 2 .5302806 0 1

mathdum2 677 2 .3781388 0 1

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