Chapter 16

A psychologist was interested in gauging the success of a mood manipulation during one of her experiments. She had three groups of participants who underwent different types of mood induction: disgust mood induction, negative mood induction and positive mood induction. After the mood induction, participants were asked to endorse nine statements relating to their mood, on a 5-point Likert scale from 1 (disagree) to 5 (agree): (1) When you're smiling the whole world smiles with you; (2) I love the pretty flowers; (3) I could never touch a dead body; (4) I would never eat cat food; (5) If someone served me monkey brain soup I would vomit; (6) I feel fed up; (7) Bodily fluids are nasty; (8) I could not drink from a glass that I'd used to catch a spider; (9) I am a worthless piece of scum.

1. What analysis should be done to see if the mood inductions had an effect on responses to these nine items?

   a. Factor analysis.

   b. MANOVA.*

   c. Repeated measures ANOVA.

   d. Mixed ANOVA.

2. Part of the (edited) output is shown below. Which statement best sums up this part of the output?

When you're smiling the whole world smiles with you:

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
GROUP	2	1.351	.676	1.380	.259
Residuals	66	32.301	.489		

I love the pretty flowers:

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
GROUP	2	3.816	1.908	1.684	.194
Residuals	66	74.793	1.133		

I could never touch a dead body:

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
GROUP	2	3.455	1.728	2.524	.088
Residuals	66	45.182	.685		

I would never eat cat food:

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
GROUP	2	12.710	6.355	9.098	.000***
Residuals	66	46.101	.699		

If someone served me monkey brain soup I would vomit:

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
GROUP	2	3.746	1.873	2.322	.106
Residuals	66	53.239	.807		

I feel fed up:

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
GROUP	2	5.594	2.797	2.739	.072
Residuals	66	67.391	1.021		

Bodily fluids are nasty:

	Df	Sum Sq	Mean Sq	F value	Pr(>F)

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GROUP         2     3.712    1.856    3.856    .026*
Residuals    66    31.766    .481
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I could not drink from a glass that I have used to catch a spider:
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             Df    Sum Sq    Mean Sq  F value   Pr(>F)
GROUP         2     .989      .494       .271    .764
Residuals    66   120.489   1.826
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I am a worthless piece of scum:
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             Df    Sum Sq    Mean Sq  F value  Pr(>F)
GROUP         2    2.923     1.461    2.253    .113
Residuals    66   42.816     .649
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a. There were significant differences between the mood induction conditions on all items.

b. There were significant differences between the mood induction conditions on two items: 'I would never eat cat food', and 'Bodily fluids are nasty'.*

c. There were significant differences between the mood induction conditions on four items: 'I would never eat cat food', 'I could never touch a dead body', 'I feel fed up' and 'Bodily fluids are nasty'.

d. The mood induction had no effect on responses to the nine items.