**Statistical concepts**

In the two (imaginary) experiments summarized below, identify the independent variable, dependent variable, experimental group and control group (if they exist).

1. A health authority has introduced a reform involving the status of health professionals in accident and emergency departments. 12 weeks after trying out the new regime, clinical outcomes are taken and compared with previous outcomes. In this experiment, what are the dependent and independent variables?

The independent variable in this study is the social status of health professionals, under the new and established regimes. The dependent or response variable is the clinical measurement.

If you are going to create a control and experimental group as part of the procedure in this experiment to better assess the effects of the stimulus, how would you implement it?

As well as accident and emergency departments with the new way of working, some departments will continue with the established regime. The departments with the new regime comprise the experimental groups; those with the established way of working form the control group. The clinical measurement should take place for each group at the same stage (12 weeks in). The clinical outcomes can be compared to see if they are significantly different.

1. Researchers are interested in the effects of media attitudes towards transgender people. Before watching a short documentary video, each participant is asked to complete a survey on their attitudes towards transgender people. Three different versions are shown to different people: although all relevant facts are covered, one version emphasizes the lives of transgender people; another particularly discusses prejudice in the community; the third has a focus on medical issues. A fourth group watches a video offering a carefully balanced coverage of everyday lives, prejudice and medical issues. After the video, participants are asked to fill in the scale again. Which are the independent and dependent variables?

The independent variable is the focus of the video's content. The dependent variable is the attitude of the viewers, based upon the scales.

Which groups are the control and experimental group?

All three of groups observing the 'slanted' video recordings are experimental groups. Those watching the 'balanced' video comprise the control group.

**Data types**

For each variable, identify the data type: continuous, ordinal or categorical).

Sex / Marital status / Level of education / Age group / Level of addiction / Salary / Survey scale

* Sex - categorical
* Marital status – categorical
* Level of education - ordinal
* Age group - ordinal (for analytical purposes, you would normally convert to integers, e.g. 0 - 9 years becomes 1, 10 – 19 years becomes 2, and so on)
* Level of addiction - ordinal
* Salary – continuous (if 'banded', this would be ordinal)
* Survey scale – usually continuous, but could be ordinal