## Psychology – Research Methods

Generating Aims; Identifying and Operationalising IVs, DVs, Identifying EVs and writing Operationalised Hypotheses

**Some possible answers!**

1. The difference in the levels of aggression after watching a horror movie or a war movie

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| Aim | To investigate whether there is a difference in aggression levels after watching a horror movie or a war movie |
| **IV** | Type of movie |
| **Op IV** | War or Horror |
| **DV** | Aggression levels |
| **Op DV** | Number of aggressive words used  |
| **Situational EV** | Length of the filmWhether it is watched alone or in a groupWhether it is watched in lit room or darknessWhether it has been seen before |
| **Participant EV** | Age of the participantWhether they have had a stressful dayAnxiety levels of the participants |
| **Directional Hypothesis** | Participants who watch a horror movie will use a higher number of aggressive words than participants who watch a war movie |
| **Non- directional Hypothesis** | There will be a difference in the number of aggressive words used between participants who watch a horror movie and participants who watch a war movie |

1. The difference in the effectiveness of Colgate and McCleans at whitening teeth

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| Aim | To investigate whether there is a difference in the effectiveness of Colgate and McCleans at whitening teeth |
| **IV** | Type of toothpaste |
| **Op IV** | Colgate or McCleans |
| **DV** | Effectiveness at whitening teeth |
| **Op DV** | The number of shades whiter the teeth are at the end of the study  |
| **Situational EV** | Length and number of times teeth are brushed each dayType of toothbrush used (electric/manual)How much toothpaste is usedWhether any other whiting agent is used on their teeth |
| **Participant EV** | Quality of the participants teethMotivation to brush their teeth the required number of times (whether they forget) |
| **Directional Hypothesis** | The teeth of the participants who use McCleans will be higher number of shades whiter than the teeth of the participants who use Colgate  |
| **Non- directional Hypothesis** | There will be a difference in the number of shades whiter the participants teeth are between the participants using McCleans and the participants using Colgate |

1. The difference in maths ability after drinking alcohol or water

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| Aim | To investigate whether there is a difference in maths ability after drinking alcohol or water |
| **IV** | Type of drink |
| **Op IV** | Alcohol or water |
| **DV** | Maths ability |
| **Op DV** | Math test score  |
| **Situational EV** | Need to use a different (but similar difficulty) test for each conditionTime given to complete the testAmount/strength of alcohol used |
| **Participant EV** | Participants natural maths ability/IQMotivation to complete the testsTolerance to alcoholAge/experience of alcohol |
| **Directional Hypothesis** | After drinking water participants will have a higher math test score than after drinking alcohol |
| **Non- directional Hypothesis** | There will be a difference in math test scores after drinking water and drinking alcohol |

1. The difference in peoples motivation levels when completing group tasks or individual tasks

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| Aim | To investigate whether there is a difference in peoples motivation levels when completing group tasks or individual tasks |
| **IV** | Type of task |
| **Op IV** | Group tasks or individual tasks |
| **DV** | Motivation |
| **Op DV** | Time spent on the task  |
| **Situational EV** | Room setting – how comfortable it isType of task kept constantWhether they know the other members of the groupDifficulty of the task |
| **Participant EV** |  |
| **Directional Hypothesis** | Participants completing tasks in groups will spend longer on the task than participants completing the task individually |
| **Non- directional Hypothesis** | There will be a difference in time spent on the task between participants completing tasks in groups and participants completing the task individually |

1. The difference in pulling success when using the chat up line *‘I hope you know CPR, because you take my breath away’* and *‘If I could rearrange the alphabet I’d put U and I together’*

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| Aim | To investigate whether there is a difference in pulling success when using the chat up line ‘I hope you know CPR, because you take my breath away’ and ‘If I could rearrange the alphabet I’d put U and I together’ |
| **IV** | Chat up line |
| **Op IV** | ‘I hope you know CPR, because you take my breath away’ or ‘If I could rearrange the alphabet I’d put U and I together’ |
| **DV** | Pulling success |
| **Op DV** | Number of phone numbers obtained  |
| **Situational EV** | How busy the nightclub isAttractiveness of the confederate/researcher |
| **Participant EV** | How much alcohol has been consumedWhether the P is single |
| **Directional Hypothesis** | Using the chat up line ‘I hope you know CPR, because you take my breath away’ will result in a higher number of phone numbers obtained than using the chat up line ‘If I could rearrange the alphabet I’d put U and I together’ |
| **Non- directional Hypothesis** | There will be a difference in the number of phone numbers obtained when using the chat up line ‘I hope you know CPR, because you take my breath away’ and ‘If I could rearrange the alphabet I’d put U and I together’ |

1. The difference in intelligence between males and females

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| Aim | To investigate whether there is a difference in intelligence between males and females |
| **IV** | Gender |
| **Op IV** | Male or Female |
| **DV** | Intelligence |
| **Op DV** | IQ scores  |
| **Situational EV** | Time given to complete the IQ testSame testWhether it is completed alone/under exam conditions |
| **Participant EV** | MotivationExposure to previous IQ tests |
| **Directional Hypothesis** | Females will have higher IQ scores than males |
| **Non- directional Hypothesis** | There will be a difference in the IQ scores of females and males |

1. The difference in stress levels between people who commute into central London using the Underground or car

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| Aim | To investigate whether there is a difference in stress levels between people who commute into central London using the Underground or car |
| **IV** | Type of transport |
| **Op IV** | Underground or car |
| **DV** | stress levels |
| **Op DV** | Blood pressure  |
| **Situational EV** | Distance to travelTime of day travellingAccuracy of BP measurementBP measurement needs to be taken at same point (i.e. directly at the end of their journey) |
| **Participant EV** | Stressful lifestyleNaturally anxious personTaking any blood pressure medication  |
| **Directional Hypothesis** | Participants commuting into central London via the underground will have higher blood pressure than participants commuting into central London via car |
| **Non- directional Hypothesis** | There will be a difference in blood pressure of participants commuting into central London via the underground and participants commuting into central London via car |

1. The difference in crime rates before and after the assassination of President Kennedy

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| Aim | To investigate whether there is a difference in crime rates before and after the assassination of President Kennedy |
| **IV** | Point in time |
| **Op IV** | Four weeks before and four weeks after the assassination of President Kennedy |
| **DV** | Crime rates |
| **Op DV** | Number of violent crimes reported  |
| **Situational EV** | Accuracy of police reportsWhether the crime is reported |
| **Participant EV** | N/A |
| **Directional Hypothesis** | There will be a higher number of violent crimes reported four weeks after the assassination of President Kennedy compared to four weeks before the assassination of President Kennedy |
| **Non- directional Hypothesis** | There will be a difference in the number of violent crimes reported four weeks after the assassination of President Kennedy compared to four weeks before the assassination of President Kennedy  |