National Qualifications 2005

Psychology Higher C212 12

Research Investigation Briefs for Session 2004/05

Candidates must choose one of the Research Investigation Briefs from the list below.

Psychology: Understanding the Individual

(1) Stress
A correlational study investigating the relationship between daily hassles/uplifts and health.

(2) Memory
A laboratory experiment on the use of chunking to improve STM recall.

Psychology: The Individual in the Social Context

(3) Intelligence
An investigation into the impact of gender on self-estimated intelligence.

(4) Atypical Behaviour
A field experiment investigating attitudes to atypical behaviour, using a social distance scale.

The research design to be followed is provided in this document.
The references provide useful background information on the topic under investigation.
Teachers/lecturers are encouraged to promote candidates' active participation in the design process, rather than simply giving the brief as a handout.

It is the centre's responsibility to ensure that candidates follow ethical procedures with all participants. See the BPS *Code of Conduct, Ethical Principles and Guidelines* (2000), at www.bps.org.uk; and the ATP *Guide to Ethics for Teachers and Students of Psychology at Pre-Degree Level* (2003), the latter being included in the SQA document *Higher Psychology Research Investigation Guidelines* (2004).

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(1) Stress

A correlational study investigating the relationship between daily hassles/uplifts and health.

Background: In 1967 two doctors, Holmes and Rahe, observed that critical life events seemed to be associated (correlated) with stress and poor health in their patients. 'Life events' include experiences such as death of a spouse, divorce, retirement etc. The researchers developed a Social Readjustment Rating Scale (SRRS) to measure the amount of adjustment demanded by these life events. They found a small but significant positive correlation between amount of adjustment and illness, and concluded this was due to the stress of life change. Extending these research findings, DeLongis *et al* (1988) suggested that it was not just major life change events that related to stress, but also the chronic hassles and uplifts of daily living. Hassles (things that annoy you) and uplifts (things that cheer you up) include cooking, being organised, weather, your children/family etc. These events may hassle you or make you feel good; some may affect you a little, some a lot. Using a 'hassles and uplifts' questionnaire DeLongis *et al* investigated married couples over a 6-month period and did find a significant relationship between hassles and health problems.

Aim: To discover whether there is a relationship between daily hassles/uplifts and illness.

Hypothesis: Candidates should devise suitable null and correlational hypotheses for the investigation.

Method: A non-experimental study by means of a questionnaire survey using a correlational design; the co-variables being daily hassles/uplifts and health. Candidates should identify an appropriate sampling method (opportunity is acceptable) and devise an ethical standardised procedure. A questionnaire should be prepared for measuring daily hassles and uplifts, to include a number of items that may hassle or uplift you. Participants should be instructed to consider how much of an uplift *and* hassle each item was for them (*see A Level Psychology Practicals for example*). A short questionnaire should be prepared to measure health e.g. 'how many times have you visited the doctor in the last year?' Other materials should be prepared, including brief/request for consent, standardised instructions, debrief.

Specific Ethical Considerations: As well as routine ethical procedures (informed consent, right to withdraw, confidentiality, debrief etc), candidates should be encouraged to explore ethical issues specific to this investigation. They should be aware of the rather personal nature of the task, and therefore of the need to ensure privacy, the right to withdraw, and sensitive treatment of participants.

Results: Data obtained should be tabulated as raw data and organised in pairs of scores (ie every participant will have three scores, one for hassles, one for uplifts and one for health, the hassles score should be subtracted from uplifts to give one score. This score should be correlated with the health score). Descriptive statistics should be applied which are appropriate to the data: a suitable type of graph would be a scattergram. Measures of central tendency and dispersion, and other types of graph (eg histogram), may be given, though not essential.

References:

DeLongis, A.,Folkman, S.,& Lazarus,R.S. (1988). The impact of daily stress on health and mood: Psychological and social resources as mediators, *Journal of Personality and Social Psychology, 54 (3),* 486-495

Holmes, T.H. & Rahe, R.H. (1967). The social readjustment rating scale. *Journal of Psychosomatic Research, 11,*213-18.

A Resource pack for 'A' level Psychology Practicals. Cara Flanagan + Hartshill Press in association with Hodder + Stoughton Educational.

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(2) Memory

A laboratory experiment on the use of chunking to improve Short Term Memory (STM) recall.

Background: As early as 1885 Ebbinghaus observed that STM capacity was limited to around 6 or 7 items of information. George Miller in 1956 extended the observations of Ebbinghaus and scientifically demonstrated the limited capacity of STM to 7 plus or minus 2 pieces of information. Miller further suggested that STM capacity could be improved by chunking. Chunking consists of combining units of information into chunks of information e.g. arranging letters into words, words into meaningful phrases and so on. Chunking is therefore related to LTM as that is where our understanding of the meaningful chunk lies (Bower + Springston 1970). Lange (1973) further demonstrated that items are best recalled when presented (chunked) into categories, e.g. floor, window, ceiling, door and wall would be remembered better than banana, table, sea, piano and ruler.

Aim: To investigate the use of chunking in improving STM recall.

Hypothesis: Candidates should devise suitable null and experimental hypotheses for the investigation.

Method: A laboratory based experiment using a repeated measures (groups, within subjects) design; the two conditions of the Independent Variable (IV) are chunking of information and no chunking of information. The dependent variable (DV) is the amount of information recalled. Controls should be discussed, with particular reference being made to the use of a repeated measures design. Candidates should identify an appropriate sampling method (opportunity is acceptable) and devise an ethical standardised procedure. Stimulus material should be prepared in the form of two memory recall tasks; one with and one without the use of chunking. Apparatus/materials should be prepared, including brief/request for consent, standardised instructions, debrief.

Specific Ethical Considerations: As well as routine ethical procedures (informed consent, right to withdraw, confidentiality, debrief etc), candidates should be encouraged to explore ethical issues specific to this investigation. They should be aware of the rather personal nature of the recall task, and therefore of the need to ensure privacy, and sensitive treatment of participants.

Results: Data obtained should be tabulated as raw data. Descriptive statistics should be applied, which are appropriate to the data, ie a mean recall score; suitable type(s) of graph(s) should be selected, ie frequency histogram or bar chart.

References:

Bower,G.H. + Springston, F. (1970) Pauses as recording points in letter series. *Journal of Experimental Psychology, 83,* 421-30.
Lange,G. (1973) The Development of conceptual and rote recall skills among school age children. *Journal of Experimental Child Psychology, 15,* 394-406.
Miller,G.A. (1956) The magic number seven , plus or minus two: Some limits on our capacity for processing information. *Psychological review, 63,* 81-93.
A Resource pack for 'A' level Psychology Practicals. Cara Flanagan + Hartshill Press in association with Hodder + Stoughton Educational.

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(3) Intelligence

An investigation into the impact of gender on self-estimated intelligence.

Background: Research by Hogan (1978) and Higgins (1987) has demonstrated that when people are asked to estimate their own IQ, men give higher estimates than women. Further support comes from Beloff, who in 1992 found that male Scottish undergraduates consistently estimated their own IQ to be around 6 points higher than female Scottish undergraduates. Beloff supported the conclusions of Hogan and Higgins, claiming that the differences found in IQ estimations could be attributed to the socialisation process. According to Beloff, females receive 'modesty training' which leads them to view themselves as intellectually inferior to men. In a review of eight such studies, Furnham (2000) suggested that gender differences in IQ estimation may be due biological rather than environmental/ social /cultural factors. Average differences found in actual IQ scores between genders are small, and diminishing over time.

Aim: To discover if the difference between genders in estimated personal IQ is still prevalent today.

Hypothesis: Candidates should devise suitable null and experimental hypotheses for the investigation.

Method: A field experiment by means of an IQ estimation task using an independent measures (independent groups, independent samples) design. The Independent Variable (IV) is gender, its conditions male and female. The dependent variable (DV) is estimated own IQ score. Controls should be discussed. Candidates should identify an appropriate sampling method (opportunity is acceptable) and devise an ethical standardised procedure, for administering the task and for recording the responses. Apparatus/materials should be prepared, including brief/request for consent, standardised instructions, debrief, response sheets.

Specific Ethical Considerations: As well as routine ethical procedures (informed consent, right to withdraw, confidentiality, debrief etc), candidates should be encouraged to explore ethical issues specific to this investigation. They should be aware of the rather personal nature of the task, and therefore of the need to ensure privacy, and sensitive treatment of participants.

Results: Data obtained should be tabulated as raw data. Descriptive statistics should be applied, which are appropriate to the data: measures of central tendency, and a measure of dispersion; suitable type(s) of graph(s) should be selected, ie barchart of means /medians, possibly frequency histograms.

References:

Beloff, H. (1992). Mother, father and me: Our I.Q. *The Psychologist, 5*, 309-11
Furnham, A. (2000). Thinking about intelligence. *The Psychologist **13 10***, 510-514
Higgins, L.T. (1978). The unknowing of intelligence. *The Guardian*, 10 February.
Hogan, H.W. (1978). I.Q. Self estimates of males and females. *Journal of Social Psychology, 106,* 137-138. Cited in McIlveen, R., Higgins, L., Wadeley, A. & Humphreys, P. (1992) *BPS Manual of Psychology Practicals.* British Psychological Society.

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(4) Atypical Behaviour

A field experiment investigating attitudes to atypical behaviour, using a social distance scale.

Background: Attitudes of the general public towards atypical behaviour tend to be negative, and can give rise to labelling, prejudice and discrimination against those with mental health problems, adding to their distress. Nunnally (1961) found very negative attitudes. Some recent research has looked at the effects of the media on perceptions of mentally-ill people: one study found that in TV dramas, 70% of characters suffering mental illness were violent (in real life the figure is approximately 8%); Minnebo and Acker (2004) found that high-school students who watched many police and horror dramas were more likely to believe a mentally-ill person would become violent.

Aim: To investigate whether knowledge that someone has a history of psychiatric treatment will affect another person's judgment of them, as measured by a social distance scale.

Hypothesis: Candidates should devise null and experimental hypotheses for the investigation.

Method: A field experiment, using independent measures design. Brief character descriptions ('vignettes') should be prepared (see Star, 1955), of an individual with or without a psychiatric history; these are the two conditions of the independent variable (IV). The dependent variable (DV) is the social distance score, which represents favourableness of judgment. Possible vignettes: 'Without psychiatric history' condition: *"Imagine that Jenny is a person you know at school/college/work. Though quite shy, she seems a nice person, and is interesting to talk to."* 'With psychiatric history' condition, add *"Over the last few years she has had spells of treatment in a psychiatric hospital"*. A social distance scale should also be devised, with 4 or 5 items such as *'I would speak to Jenny in the street', 'I would invite Jenny to a party in my home'* etc; responses on a Likert scale, to be totalled for each participant. Controls should be discussed. Candidates should identify an appropriate sampling method (opportunity is acceptable) and devise an ethical standardised procedure, for administering the task and for recording the responses. Other materials should be prepared, including brief/request for consent, standardised instructions, debrief.

Specific Ethical Considerations: As well as routine ethical procedures (informed consent, right to withdraw, confidentiality, debrief etc), candidates should be encouraged to explore ethical issues specific to this investigation. They should be aware that participants may have personal experience of mental health problems, ensure privacy and sensitive treatment, and emphasise the right to withdraw. Consideration should be given as to how much information is provided re the aim of the investigation. If full information is given socially desirable answers may be given, if not then ethical issues arise.

Results: Raw data should be tabulated. Descriptive statistics selected should be appropriate to the data: measure(s) of central tendency; measure of dispersion; suitable type(s) of graph, ie barchart of medians/means; other graphs are possible, eg frequency histograms.

References:

Minnebo, J. & Acker, A.V. (2004). Does television influence adolescents' perceptions of and attitudes toward people with mental illness? *Journal of Community Psychology*, 32, 257-275.
Nunnally, J (1961), *Popular Conceptions of Mental health: Their Development and change.* New York*:* Holt, Rinehart and Winston.
Star, S.A. (1955), *The Public's Ideas About Mental Illness*. Mimeo National Research Center.Chicago:University of Chicago. Cited in McIlveen, R., Higgins, L., Wadeley, A. & Humphreys, P. (1992) *BPS Manual of Psychology Practicals.* British Psychological Society.