Cambridge Assessment International Education

Teaching Studies

Cambridge International AS & A Level Psychology 9990

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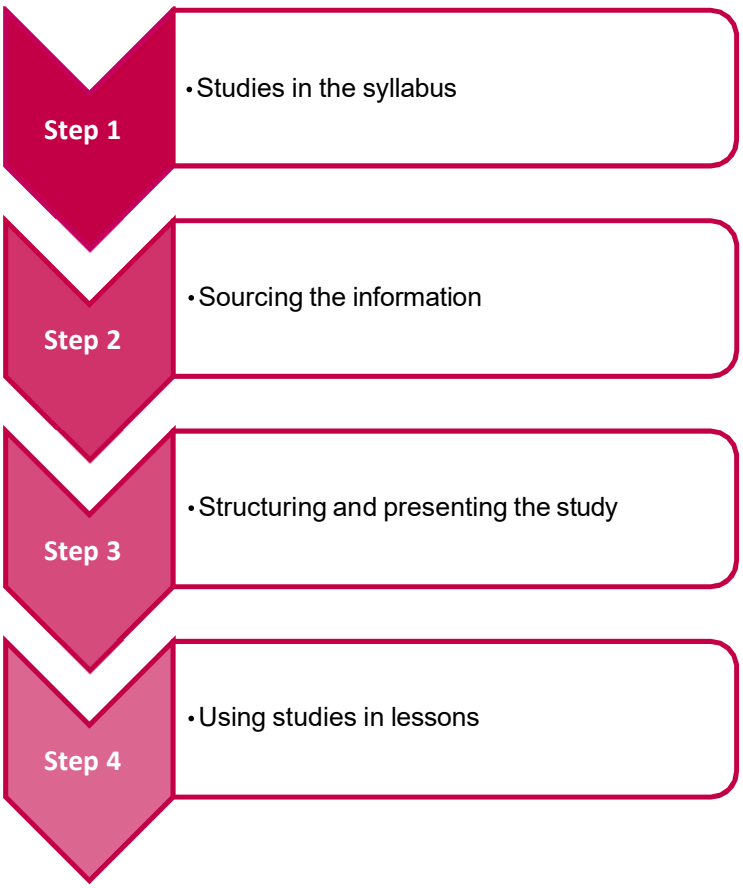
Cambridge Pathway

Contents

Introduction

An essential part of teaching psychology is the delivery of core studies (AS Level), key studies (A Level) and study summaries (A Level). Learners should be able to use studies to support their understanding and demonstrate their knowledge. Learning, applying, and evaluating study information is fundamental to the development of learners' skills and teaches them to use a wide variety of resource materials.

This resource is intended to be a step-by-step guide for teachers designing and delivering the Cambridge International AS & A Level Psychology course. The guide has broken down the process of developing and delivering studies into the four steps shown below. This information is followed by two study examples.



Step 1

Studies in the syllabus

Using studies allows your learners to develop a clear understanding of complex psychological research. A good study should help learners to consider how we research and analyse human behaviour.

By developing study summaries, you ensure that your learners have the critical information from a given study. They can be an invaluable resource to use within the classroom, as homework or for practicing exam style questions. Throughout their course your learners will build a portfolio of these studies which will develop their understanding of psychology and be a useful revision tool. The syllabus provides you with all the studies your learners must cover at AS and A Level.

It is important to realise that there are different approaches to the way your learners should engage with the studies at AS and A Level. At AS Level, learners should be familiar with, and should have read all the 12 compulsory core studies. Similarly at A Level, learners should be familiar with the five key studies named within each optional section. There are, however, a number of named example studies within each of the optional sections where an overview of each study is sufficient. Learners therefore do not need to look at the original studies but can use summaries instead.

Issues and debates

The list below shows the issues and debates learners should consider in response to the syllabus content (AS Level debates are shown in italics):

- *the application of psychology to everyday life*
- *individual and situational explanations*
- *nature versus nurture*
- *the use of children in psychological research*
- *the use of animals in psychological research*
- cultural differences
- Reductionism versus holism
- determinism versus free will
- idiographic versus nomothetic

Step 2

Sourcing the information

The syllabus and reference list will provide you with full references for the studies. Many journal articles can be found online for free using academic search engines, such as Google scholar. However, when using search engines be careful to search for and select the original journal articles rather than citations. Citations are when research has been summarised by other psychologists for the basis of their own research.

The problem with using these is that you and your learners are unlikely to access the required details of the procedure, results, and discussions.

You should ensure when you are producing the study summary that you clearly reference the journal by placing any direct quotations from the article in quotation marks. This is good to model for your learners, so that they realise it must be clear where they are using the words of researchers rather than their own.

To develop your own understanding of the resources used by the researchers you may want to look in the appendices for particular scales or questionnaires that have been used. You may have to search for these separately. For example, Lovell's study used the Yale Brown scale to examine severity of obsessive-compulsive disorder and Beck's Depression index.

Useful sources

The scheme of work identifies a number of sources of information for each unit of the syllabus. Many of these would be useful to support your learner's understanding of the studies:

Useful information for Fagen et al (2014) about elephant training and the work of mahouts.

www.elephantconservationcenter.com/positive-reinforcement/

This is a useful video for Hassett et al (2008) on monkey toy preferences. www.youtube.com/watch?v=Bm9xXyw2f7g

The following videos are useful for mindfulness and the study by Holzel et al (2011)

www.youtube.com/watch?v=GszmHs8qPFE

www.youtube.com/watch?v=JNaXUFL_Um4

An excellent overview and analysis of the five facets mindfulness questionnaire (FFMQ) as used by Holzel et al (2011) with links to the actual scale: https://positivepsychology.com/five-facet-mindfulness-questionnaire-ffmq/?utm_content=cmp-true

A useful summary of bystander apathy/diffusion of responsibility:

www.simplypsychology.org/bystander-effect.html

Step 3

Structuring and presenting studies at AS Level

Learners need to have a detailed understanding of the 12 core studies outlined in the syllabus. Learners will be assessed on the following:

Psychology being investigated: The specification highlights the psychology investigated by a specific study. For example, Bandura et al (aggression) investigates social learning theory, and aggression. Learners need to understand these concepts, how they relate to the study in question, and how the overall study relates to the assumptions of the approach.

Background: it is important for learners to understand the background to the research, or the preceding understanding of a given phenomenon. For example, Stanley Milgram believed that there was something intrinsic about German culture that produced the high level of authority to the Nazi regime. It was these beliefs that made Milgram's findings so unexpected, changing our understanding of levels of obedience.

Aims: If psychological research has multiple aims, it will be important for learners to understand how each aim was investigated within the procedure, how the results were recorded and what conclusions were subsequently drawn from them.

Procedure: The syllabus requires learners to have knowledge and understanding of all aspects of the procedure. This includes all methodology such as sampling technique and size (if known), experimental design, controls, how data was collected, and how variables were manipulated and measured; All the above needs to be evaluated in terms of issues such as reliability, validity and generalisations.

Results and conclusions: Learners should know the quantitative and qualitative results of the study and what conclusions the psychologist(s) have been able to draw.

Strengths and weaknesses: It should be possible for learners to critique the studies, identifying strengths and weaknesses of the research Learners must also be able to relate appropriate AS Level issues and debates to each study.

Study sections

Psychology investigation

What psychological concepts are being investigated in the study?

Background

The background to the study is likely to include links to prior research and the understanding of a psychological concept. The background may illustrate a particular psychological approach so that learners understand the context within which the study is carried out.

Aims

It must be clear to learners why and how the aims of the study were framed.

Procedure

At AS Level understanding the methodological decisions made by researchers and the effects these decisions have on validity, reliability, etc. is important. Not only must they be able to discuss this in their answers but also apply this to their own research design in Paper 2.

Results and conclusions

Learners should know any qualitative or quantitative results and the conclusions that have been drawn from these.

Strengths and weaknesses

Learners should be able to evaluate the studies with confidence. The tables in the examples at the end of this booklet are an example of the way this could be achieved.

Structuring and presenting studies at A Level

Psychological research studies form an integral part of candidate learning for A Level Papers 3 and 4. There are five key studies within each specialist option which candidates are required to know and understand, however there are also several named studies which aim to further candidates understanding of topic areas within each option.

For the key studies, it is not essential for candidates to read the original journal article, but it will be necessary for teachers to provide detailed summaries which will cover all the aspects which are named within the syllabus to include context, aims/hypotheses, methodology, results, and discussion points. In contrast, the named studies are not compulsory and will not be specifically named in questions. Teachers can, therefore, substitute alternative studies within these topic areas but need to make sure that they cover all the subject content required, including the specific research methodology used. As such, for example studies there is more emphasis on the impact of the decisions made by the researcher and what conclusions can be drawn in relation to the specific topic area. Therefore, the study summaries you produce are likely to have less detail about the study itself and the way it was conducted, and instead explore the issues the study has raised in more detail.

The allocation of marks within the A Level papers has a greater emphasis on higher order skills such as application of knowledge (AO2) and analysis and evaluation (AO3). The A Level example at the end of this document reflects this focus but has all the same category's learners will be familiar with from AS Level. The A Level example for a key study has a table in which evaluative points are referred to and developed. The use of a table like this is one approach you could use. This helps your learners to discuss the strengths and weaknesses within a study and so demonstrate their ability to analyse and develop arguments about the effectiveness and nature of the research/research methodology which may form one of the questions in Paper 3 and 4.

For example, in organisational psychology Paper 3, candidates could be asked to evaluate the study by Giacalone and Rosenfeld (1987) including a discussion on questionnaires. Therefore, learners should be able to make a judgement about the use of questionnaires in the study, alongside other methodological strengths/weaknesses, and issues and debates. One way to do this is to use a table, like the one shown at the end of this booklet. This should allow your learners to have several discussions points they can use in the above question, and how these can be developed to achieve the higher bands. It is important to note that for paper 4, candidates may be asked about research design and methodological issues for **specific** key studies therefore it is important that teachers provide materials to enable candidates to access these questions. For example, for the above study candidates may be asked to describe two ways that Giacalone and Rosenfeld (1987) followed ethical guidelines in the study.

Assessment objectives

With regards to psychological terminology, concepts (ideas and processes) theories, studies, evidence, methodology and practical applications, candidates should be able to:

AO1 Knowledge and understanding

Demonstrate their knowledge and understanding

AO2 Applying knowledge and understanding

Apply their knowledge to familiar and unfamiliar scenarios taken from everyday life of theoretical contexts.

AO3 Analysis and evaluation

Analyse and evaluate psychological concepts, theories, studies, and methodology

Using studies in an examination

Comments

Paper 1 example

Evaluate the study by Fagen et al (elephant learning) in terms of two strengths and two weaknesses. At least one of your evaluation points must be about validity. (10 marks)

One strength of Fagen et al's study is that they used a standardized procedure throughout. The researchers used a behavioural checklist alongside operationalised definitions of each of the trained behaviours. For example, 'blow' was 'a strong sharp exhale through the trunk'. The secondary positive reinforcement procedure (SPR) was also the same for all elephants, and sessions were accurately timed by a research assistant. This level of standardization is a strength as these procedures can be accurately used by other researchers in order to test for reliability.

One weakness of the study is that you may not be able to generalize the results beyond the sample used. Fagen et al only used 5 female elephants, only one of which was an adult. This adult elephant had physical issues, and subsequently failed to learn the trunk wash. This is a weakness as the physical issues suffered by the only adult, and the lack of adult males, may mean that the results may not be representative of all adult elephants, who may be able to learn behaviours through operant conditioning.

One strength is that the study has high validity. The trainers (Mahouts) were not allowed to give any additional verbal commands to the elephants during training. This is a strength as it eliminates the possibility of the trainers giving more commands to one elephant than another, which would be a uncontrolled variable that could affect results. This is a strength as we can be sure that it is positive reinforcement that led to success in the trunk wash, rather than the additional commands,

A final weakness was that the measurement of the elephant's success may have been subjective. Fagen et al used only the trainer to decide whether the elephants' actions matched the behavioural checklist definition, and whether the elephants would be successful at a trunk wash in real life. This is a weakness as the trainers may have been biased in their decisions due to wanting the elephants to be successful, and they may not have used the same criteria for each behaviour for all elephants as these were not checked, reducing the validity of the findings.

This type of question is purely AO3 and does not include AO1/AO2. So, it is important that responses concentrate on evaluation points rather than detailing the studies aims/results.

When evaluating a study, it is important that responses do not make generic evaluation points, which could relate to any study. This paragraph identifies a relevant evaluation issue in context (generalisability), explains why this is a weakness in this study and then explains in more detail the consequences of this (may not represent all adult elephants).

Make sure that learners are aware that if they do not discuss the named evaluation point within their response, they will not be able to obtain full marks, no matter how good their response is. Remember that the question says at least one, so learner can do more than one if appropriate.

Step 4

Using studies in lessons

Depending on your learners' ability and the number of teaching hours available to you, using studies in lessons can be done in a number of ways. The list below shows some examples of approaches you could take. You may decide to work towards the later examples in this list as your learners become more confident with psychological terminology and how psychological research is written.

Most of the strategies below focus on how you might teach the core studies at AS Level. However, many of the techniques can be adapted to help learners develop and use their study summaries at A Level.

Simple strategies to start teaching studies

- Learners could be given statements to insert into the appropriate section of a pre-prepared study outline.
- More complex sections of the study could be pre-completed leaving learners to complete more straightforward aspects such as procedures or results. An example of this sort of activity is shown on the next page.
- Learners could conduct the research as participants, for example for Andrade's study on doodling. In this way, the experience of participating could help reinforce your learner's knowledge of a range of aspects of the study.
- You may wish to show videos of the original research. Following this, the study outline could be completed by learners to consolidate their knowledge. They could do this in the lesson or as part of their learning outside the classroom.

Intermediate strategies to teach learners whose understanding of studies is developing

- Learners could be divided into groups to research particular aspects of a study and then feedback to each other. This could be an opportunity to differentiate based on the types of tasks given.
- Learners could be given the original full text article (AS only) to read and annotate in preparation for the lesson.
- Learners could be given the original full text article (AS only) and asked to complete some or all of the sections on the study document in preparation for the lesson. By completing the simpler aspects of the study in advance, the lesson can focus on evaluating the study and discussing application of the issues.
- Allocating specific learners or groups of learners a given issue to discuss.

More challenging strategies to use with learners who are confident with studies

- Learners could be asked to discuss the impacts of the issues identified by other learners.
- Having completed the evaluation grid, learners could be challenged to identify and discuss the impact of relevant issues that other learners do not have on their grid.
- Learners may be challenged to find the strengths and weaknesses within each issue. This is often challenging in relation to reductionism as learners often fail to identify its strengths. For example, reducing complex behaviours into their simplistic components makes it possible to experiment on a given issue or assess the effect of a specific variable.

Using a partially completed study with learners

Dement and Kleitman (sleep and dreams)

Dement, W. and Kleitman, N. (1957) The relation of eye movements during sleep to dream activity: an objective method for the study of dreaming, *Journal of Experimental Psychology, Vol 53, No. 5, 339-346*

Background

Previous research into dreaming has relied on subjective methods of testing. This has confirmed a higher likelihood of dream recall in periods of rapid eye movement and that REM regularly occurs during the sleep cycle.

Aim(s)

a) ……

b) ……

c) ……

d) ……

Asking your learners to fill in the aims of the study encourages them to consider what the researchers were aiming to find out. Theis means they can make judgements about effectiveness at the end of the study.

Procedure

Method: Participants reported to a laboratory before their usual bedtime. Electrodes were placed near the eyes to record eye movements and on the scalp to record brain waves using an EEG. At various times throughout the night the participant was woken to test dream recall. The participants were woken by the ringing of a bell oud enough to ensure waking was immediate.

Sample size: 7 male adults, 2 female adults.

Experimental design: This was a repeated measures design as participants were tested against themselves.

Controls: Participants were asked to eat normally but avoid caffeine and alcohol as these could affect either the ability to sleep or the nature of sleep. A single cord was used to prevent entangling which might wake or be harmful to the participant. Participants were woken in the same manner each item. Participants were never informed if their eyes had been moving when woken up.

Ethical issues:

……

……

……

……

Tasks:

a) ……

……

……

b) ……

……

……

c) ……

……

……

Noting the tasks participants were asked to perform could inform your classroom discussions about issues such as reliability and validity. You could ask learners to consider these issues in more depth as part of their homework.

Measured variables: Dream recall, amount of time spent dreaming, dream narrative, pattern of eye movements

Manipulated variables: Whether woken in REM or NREM, when participants were woken up during REM

Results

a) ……

……..

……..

b) …… ……

……..

……..

c) ……

……..

……..

Looking at the results encourages learners to consider how these relate to the aims of the study and what they reveal about the phenomenon under investigation.

Conclusion

The quality and quantity of REM varied between participants but each participant experience REM every night. Dreaming is most often experienced in REM although not exclusively with the pattern of eye movement representative of wheat is being dreamed of.

Using an evaluation table for core studies at AS Level

Dement and Kleitman (sleep and dreams)

Issue	Discussion of the issue	Impact on psychological understanding
Methodology	Laboratory experiment using an EEG to measure brain activity	…… ……
Selection of Participants	9 adults took part, with 5 studied intensively.	There were 7 males and 2 females in the sample. The use of only 2 females may mean that there is not enough evidence to apply the results to females whose sleep patterns may differ, as well as the content of their dreams.
Extraneous (confounding) variables		The way that the participants were woken up by a doorbell may have changed the recollection of their dreams. Sleeping with electrodes on their head may have affected their sleep patterns and therefore their ability to dream.
Generalisability of findings	There may be an issue making generalisations to the wider population, due to the sample and methodology used	It is important to choose carefully which areas to leave blank based upon the experience and knowledge learners have of psychological issues. Perhaps at the beginning of their AS level only one or two of the more straightforward issues should be left blank, but this should increase to the point that near exam time they should be able to fill all the boxes in themselves.
Validity	Participants were asked to report to the lab at normal bedtime, not to drink alcohol or caffeine and slept in the lab connected to electrodes.	
Reliability		As this was a laboratory experiment there were several controls. For example, participants were asked not to take caffeine and alcohol, they were not told whether they were in REM sleep and were asked to recall their dreams straightaway, so they did not forget them. Data collected was mainly quantitative, i.e., number and duration of dreams.
Ethical issues	There were no significant issues with ethics although the disruption in routine and sleeping in a lab may cause participants issues.	
Nature vs. nurture		The ability to dream is a product of nature, however the content of our dreams could be down to life experiences and emotional state at the time which is nurture.
Application of psychology to everyday life.	The study may be useful to increase understanding of how the brain works, and the nature of dreaming.	If understanding can be increased about how people sleep, and dream, then this may be useful for people who struggle in those areas, such as those who suffer with insomnia, or night terrors. Indeed, sleep studies are used regularly to try and help those with sleep disorders. However, the lower ecological validity may limit the usefulness of findings to normal sleep behaviour.
Similarities and differences to other studies in the biological approach	Both Dement, Kleitman and Holzel et al used scientific equipment within their study.E.g, Dement and Kleitman used EEG to measure brain waves, and Holzel et al used MRI to look at brain regions. However, Holzel et al was a longitudinal design over 2 months whereas Dement and Kleitman was a snapshot study. All three studies were experiments, however, although Dement and Kleitman was completed in a lab whereas Holzel was in a natural environment.	
Link to Assumptions of the Biological approach	It is important that learners are taught the links between the key assumptions of an approach and each of the core studies. This is a more difficult skill therefore this is an area for learners to fill in once theatre more confident with psychological content and issues.	

Example summary of AS Level study – biological approach

As this is a core study, learners would be expected to know all elements of the research.

Holzel et al. (Mindfulness and brain regions)

Hölzel, B K, Carmody, J, Vangel, M, Congleton, C, Yerramsetti, S M, Gard, T and Lazar, S W (2011), Mindfulness practice leads to increases in regional brain gray matter density. *Psychiatry Research,* 191(1): 36–43.

Background: Research has shown that practising mindfulness meditation may lead to positive effects on wellbeing. Neuroimaging techniques such as an MRI can be used to look at the neural mechanisms underlying mindfulness practice and have shown differences in gray matter concentration between those that do/do not practise in areas such as the hippocampus and cerebellum which have specific functions (localisation of function)

Psychology being investigated: Mindfulness, localisation of function

Aim(s)

To identify brain regions that change in structure due to participation in an eight-week Mindfulness Based Stress Reduction (MBSR) course.

To find objectively measurable neurological changes that could underly trait changes associated with mindfulness practices.

Procedure

Method: Experiment using a longitudinal design using MRI scans and self-reports. Correlations also used.

Sample: 33 right-handed adults aged 25-35, from New England, USA. Both experimental and control groups had been self-referred/physician referred on to MBSR courses. Control group participants were on the waiting list.

Experimental design: Independent measures. Participants only took part in one condition (experimental or control)

Controls: Only right-handed adults were used to control for differences related to brain structure. Strict inclusion criteria for the MBSR group such as having no meditation classes in the last 6 months.

Tasks: All MBSR (experimental group) participants were scanned twice (using an MRI). Once during the two-weeks before participation and one in the two weeks after participation. The control group were also scanned twice, approximately two months apart. MBSR training for the experimental group comprised of eight, weekly group meetings lasting two hours, plus one full day during the sixth week of the course. Formal mindfulness training included a body scan, mindful yoga and sitting meditation. Participants received a recording of 45-minute mindfulness training exercises to practice at home, and participants recorded the amount of time engaged in mindfulness exercises. Both experimental and control group participants also completed the Five Facets Mindfulness Questionnaire (FFMQ) before and after the training programme.

Independent (manipulated) variable: Whether participants did or did not practice mindfulness meditation.

Dependent (measured) variables:
Performance on the Five Facet Mindfulness Questionnaire (FFMQ)
Gray matter changes in the brain (analyzed through voxel-based morphometry (VBM))
How long participants in the experimental group spent engaged in formal homework activities

Results: MBSR participants reported spending an average 22.6 hrs in mindfulness activities (average 27 mins per day). Most time was spent body scanning twice the amount of yoga and meditation.

The FFMQ showed significant improvements in the practicing (experimental) group in terms of awareness, observing and non-judging compared to the non-practicing (control) group. No significant improvements in describing or non-reactivity were seen.

The MBSR group showed increased gray-matter concentration post participation in the left hippocampus, posterior cingulate cortex, left tempo-parietal junction, and the cerebellum, when compared to the pre participation scan. There was no increase in the control group pre and post participation.

Conclusion: Participation in 8 weeks of mindfulness training can produce longitudinal changes in gray matter concentration in areas of the brain involved in memory and emotional control; such as the cerebellum and the left hippocampus. This suggests that these are key areas of the brain when looking at the improved wellbeing produced by mindfulness training.

Evaluation table for AS Level study – biological

	Discussion of issue	Impact on psychological understanding
Methodology	A longitudinal experiment using an MRI scan, and a questionnaire (five facet mindfulness questionnaire)	Scanning techniques are objective and credible, with no interpretation required. Quantitative measure that allows direct comparisons between groups. Some of the traits measured by the questionnaire may be seen as desirable leading to participants answering in a socially desirable way.
Selection of Participants	33 participants self-referred/ referred by a physician for stress reduction. Strict inclusion criteria for the MBSR group.	Participants were selected from people enrolled in four mindfulness courses in the USA, who were then subject to strict inclusion criteria. This is a fairly narrow sample, which may not be representative of the wider population. However, strict inclusion criteria limits other factors such as experience, handedness from affecting results
Extraneous (confounding) variables	Inclusion of a passive control group means we are unsure whether other factors have caused the increase in wellbeing.	There may be factors other than mindfulness that caused the improvement in wellbeing in the experimental group, such as social interaction, or the use of exercise. The control group did not have any social interaction or exercise, so it is impossible to isolate the specific reason for structural changes/improved wellbeing.
Generalisability of findings	Sample of 33 right-handed adults from the USA who either were self-referred/physician referred onto a MBSR course for stress reduction.	Difficulty in generalizing results to left-handed adults who may use their brain differently in relation to mindfulness meditation. The study only used adults who were self/physician referred for a specific reason (stress reduction) so generalizations to those not stressed/suffering from other disorders is problematic.
Validity	The study aimed to find out whether mindfulness meditation can lead to improved mental well-being however lack of standardization within and between groups may be problematic.	Confounding variables mean we cannot be sure that mindfulness caused improved wellbeing. An active control group with set tasks or similar amounts of social interaction as the experimental group would help to isolate the variables which caused structural changes. No supervision of the experimental group means some may not have completed the activities properly (or at all) but said they did. However, use of a control group does allow direct comparisons to be made which may increase validity.
Reliability	Only right-handed adults were selected, and the amount of previous experience of mindfulness techniques was controlled. Lack of standardized procedure for both groups.	Researchers only used right-handed adults due to the possibility of differences in brain structure in left-handed adults. This allowed for consistent comparison between groups, as did the control on previous experience. However, how 'homework' completed was not standardized. Participants completed different amounts and different times, places. We do not know whether the control group independently practiced any mindfulness type practices.
Ethical issues	Both the experimental and control group were protected from psychological and physical harm.	No participants had metallic implants i.e., pacemakers due to potential for harm from MRI scan. Those who my become claustrophobic in the scanner were also excluded. Two people who suffered discomfort withdrew from the study after the first scan. The waitlist control group completed an MSBR course after the study, so they were not excluded from treatment.
Nature vs. nurture	Suggests that both nature and nurture are a factor in health and wellbeing.	Experiences such as mindfulness meditation (nurture) can cause changes in specific areas of the brain (nature) linked to emotional control and memory (localization of function).
Application of psychology to everyday life	Mindfulness based practice may be useful for schools, and other high stress environments.	The practice of mindfulness may be useful for schoolchildren to improve wellbeing. This could be very useful during high stress periods such as examinations etc. Also, usage in high stress workplaces such as healthcare may help to improve wellbeing of employees.
Similarities and differences to other studies	Both Dement and Kleitman and Holzel used brain scanning techniques. However, Holzel used an independent measures design whereas Dement and Kleitman used a repeated measures design. Holzel looked to see whether life experiences such as mindfulness (nurture) could change brain structure whereas Hassett et al looked to see whether biological factors (nature) cause differences in behaviour.	
Link to Assumptions	Holzel et al (2011) study showed that interactions between biological factors (brain structure) and life experiences (mindfulness) can influence behaviour. Also shows that there are specific areas of the brain (localization of function) that are linked to emotional control, and wellbeing.	

Example summary of A Level named study – health option

For named (example) studies, the focus is not on the details of the study but rather what it might tell us about this element of psychology. Therefore, although the whole study is presented here, the emphasis should be on how the research can illustrate the content, the issues and debates raised, and the methodology used.

Lewin et al (1992) (Home based exercise programmes – topic area: Giving information: health promotion)

Background: A home-based exercise programme may be as useful for improving cardiovascular health after an acute myocardial infarction (heart attack). Myocardial infarction requires significant lifestyle adjustment, and a rehabilitation programme can help reduce distress, and improve quality of life.

Aim(s)

To find out whether a comprehensive home-based exercise programme would reduce psychological distress after a myocardial infarction (MI).

Procedure

Method: An experiment using self-report techniques (questionnaires).

Sample size: 176 patients who had been admitted to a coronary care unit in the United Kingdom.

Experimental design: independent groups design; patient assigned to the control or intervention group.

Controls: Patients in each group were asked not to talk to other patients who had suffered an MI about the intervention. The study used a double-blind procedure. Allocation to the control or experimental group was stratified to control for age, gender, and initial psychological distress.

Tasks: Three days after admission to hospital, patients were randomly allocated to either the control or experimental group. The experimental group followed a rehabilitation programme based upon a heart manual which included education, an exercise programme, and a tape-based relaxation/stress management programme. Spouses were provided with information and invited to take part to encourage compliance. The control group received the standard care alongside a placebo package of information and informal counselling. At one, three and six weeks after discharge both groups had either a telephone call, clinic appointment or home-visit. Progress with the rehabilitation programme was checked with the experimental group; control group patients were asked about their recovery and given general advice. Postal questionnaires were sent out at six weeks to both groups.

Manipulated (independent) variables: intervention (experimental) or control group.

Measured (dependent) variables: score on the General Health questionnaire (GHQ) and Hospital Anxiety and Depression scale (HAD), number of hospital admission 6 and 12 months after their heart attack.

Results: Anxiety scores showed significant treatment effects at 6 weeks and 1 year, whereas depression scores only showed this at 6 weeks.

Before discharge, 92 patients had scores on the HAD scale which indicated depression, or anxiety and there were no differences between control and intervention group. At follow up points, the control group were significantly more anxious and depressed.

The control group made a mean of 1.8 more GP (doctor) visits in the first 6 months, and a mean of 0.9 more visits in the following 6 months. Significantly more patients in the control group were readmitted to hospital (24%) than the rehabilitation (experimental) group (8%) in the first 6 months but not at 12 months.

Conclusion: Findings suggest that it may be worth offering home based exercise programmes to all patients with acute myocardial infarctions due to improved wellbeing, lower rates of anxiety and depression and fewer subsequent doctor visits.

Evaluation of A Level named (example) study – health option

An evaluation table as shown below may help learners to create a summary of the study. Using a table will allow them to assess the implications of the research rather than the detail. This table heading use the relevant issues and debates/methodology linked to the specific topic area in the syllabus.

	Discussion of issue	Impact on psychological understanding
Methodology	Self-report techniques were used to measure anxiety and depression (HAD) and general health (GHQ).	Self-reports may be subject to social desirability bias especially given the sensitive nature of the topic. Patients may not want to disclose how anxious they were, meaning that scores on the questionnaires may not be reliable. However, scores did align with reported doctor visits and readmission which suggests that this may not be an issue.
Participants	Participants were all from the United Kingdom and had suffered a myocardial infarction (MI).	As participants were only from the United Kingdom it may be difficult to generalize the results of the study to other countries/cultures/diseases which may not respond as well to home-based rehabilitation programmes.
Extraneous variables	The funding for the study ran out halfway through which meant many of the participants were not followed up at the 6 month and one year period.	As only around half the participants were followed up fully to one year, it could well be that the other half who were not followed up had very different outcomes which would have changed the results completely. Also, other factors such as level of social support, personality were not measured in each group so these could be factors affecting results.
Validity	a) Although a control group was used, there was not a 'no intervention group' used as a baseline b) A double-blind procedure was used by the researchers. c) Follow-up to one year only.	a) The lack of a 'no intervention' group meant that no baseline was measured as both groups received some treatment. However, due to the serious nature of a heart attack it would be ethically impossible to not provide treatment. b) The use of a double-blind procedure (for the nursing care team and cardiologist) improves the validity of the findings as it reduces the chances of experimenter effects/demand characteristics which may have affected the results. c) As follow up was only to 1 year it is not known whether there were any long-term effects of the intervention.
Reliability	Several controls put in place: equal amount of follow up time for both groups, and the experimental group not talking to others who had suffered an MI.	Putting controls in place increases the reliability of the study as it means there is less likely to be other variables affecting the results. Results were also quantitative i.e., scores on the self-reports, and number of readmissions, etc. which are not subject to interpretation, so more objective.
Ethical issues	Both groups were given some form of treatment	By treating all participants and not having a nonintervention baseline, the researchers prevented the risk of harm due to increased severity of symptoms, or danger to life.
Reductionism versus holism	Only looked at the effects of one treatment programme on the well-being of patients after a myocardial infarction.	Results assume that the improved treatment outcomes, depression, and anxiety scores were due to the home-based exercise programme. It may be that other factors such as social support and better general health are as important
Individual and situational explanations	Lewin et al showed that situational factors are important when looking at /rehabilitation from serious health issues such as a heart attack. And how successfully an individual can readjust.	Although personality (individual) may cause an individual more anxiety/depression when faced with health uncertainty and readjustment, Lewin et al shows that situational factors such as tailored support, social interaction and structure can positively affect both physical and mental health (situational)
Cultural differences	Sample was from the United Kingdom, so cannot be sure that results would be replicated in other countries/cultures.	it may be that home-based exercise programmes are more effective for people in the United Kingdom, which is a western, individualist culture. than collectivist cultures
Application of psychology to everyday life	Use of home-based exercise programmes with patients who have suffered a heart attack may provide long-term benefits which are as effective as hospital-based programmed.	This use of home-based exercise programmes means that patients can recover within their own homes, which will be more comfortable, whilst saving cost and resources for hospitals. However, although Lewin et al study showed that the experimental group produced more positive results than the control group, more research needs to be done to ensure it is as effective as hospital-based rehabilitation.

Summary of key study (organisational: attitudes to work): Workplace sabotage

Giacalone, R A and Rosenfeld, P (1987), Reasons for Employee Sabotage in the Workplace. Journal of Business and Psychology, 1(4): 367–78

Context: Workplace sabotage is when an employee behaves in a way which results in a production or profit loss in a company. There are two types of sabotage; Instrumental, which is when an employee is trying to achieve limited demands, and demonstrative sabotage, which is a protest against management, or some perceived injustice. Research has suggested employees use sabotage as a way of feeling in control of their environment and will often minimize their actions through reasons which may make the action seem justified.

Aim(s)

- To explore whether those who accepted more reasons for sabotage would be more likely to justify the action and see it as more acceptable.
- To explore if there are different types of sabotage that may be seen as more acceptable/justified.

Procedure

Method: Self reports using structured questionnaires with a seven-point likert scale.

Sample: Volunteer sample of 38 labourers working in an electrical factory in the United States of America; they were all union members.

Controls: The use of structured questionnaires meant that quantitative data was collected which did not require interpretation. Participants were asked to complete the questionnaire by a non-supervisory colleague at the same level, reducing the chance of the participants feeling pressured to give a certain answer.

Tasks:

a) Construction of the questionnaire

The sabotage methods questionnaire construction began with a retired employee, who had worked at the electrical factory, being asked to produce a list of sabotage methods that had been used by employees. His original list comprised of 29 different sabotage methods which were then placed in four categories: work slowdowns, destruction of machinery/premises/products, dishonesty, and causing chaos. The same ex-employee also produced a list of employee's suggestions for reasons why sabotage occurred, and how it was justified; this resulted in a list of 11 reasons including self-defense, revenge, and 'just for fun'.

b) Completing the questionnaires

The participants were asked by a non-supervisory colleague at the same level to fill in both questionnaires. They were told that management would not see their responses, which would be used for an industrial psychology seminar. Participants were told not to write anything identifiable on the questionnaire. The participants were asked to rate the 29 methods and 11 reasons using a 7-point likert scale (1 being not at all justifiable, 7 totally justifiable). For the sabotage reasons questionnaire participants were given a total score, placed in order and a median obtained. They were then placed into one of two groups based on whether their score was above or below the median (high or low reason acceptors). The responses on the sabotage methods questionnaire were also totaled and a median score for the four sabotage methods was obtained.

Results: High reason acceptors saw work slowdown, destruction of machinery/premises/products and causing chaos as more justifiable methods of sabotage than low acceptors. For dishonesty, there were no significant difference between the groups, although high acceptors saw it as slightly more justified. The researchers suggest that this may be due to dishonesty being the only one that leads to financial (and personal) gain. In terms of reasons for sabotage, protection of your job was seen as the most justifiable reason, with release of frustration being the least justifiable reason.

Conclusion

- Future research should focus on how sabotage can be recognized/detected rather than the cause. Focusing on recognition/deterrence may reduce the potential for accidents as well as a company's financial losses.
- The higher the number of reasons employees accept for sabotage, the higher the level of justification for all types of sabotage (except for dishonesty).

Evaluation table for key study (organisational): workplace sabotage

	Discussion of issue	Impact on psychological understanding
Methodology	The research used self-reports in the form of structured questionnaires with a seven-point likert scale	Likert scales produce quantitative data which meant that median scores could be calculated allowing for comparisons between those participants who were above and below the median. However, self-reports may be subject to social desirability bias especially given the sensitive nature of the topic area (which could be a criminal act), although confidentiality was assured which may reduce the impact of this.
Selection of Participants	The 38 participants were recruited via a volunteer sampling method	Volunteer sampling means that the participants are motivated to take part in the research, meaning that they may answer more accurately. However, it may well be that people who will volunteer for a study about sabotage may have certain types of personality characteristics or have 'nothing to hide'. Perhaps those who had participated in sabotage would not volunteer, biasing the sample.
Generalisations from findings	The sample comprised of 38 volunteers who were employees at a single electrical factory in the United States of America (USA)	As the sample was from the USA it may well be that the results cannot be generalized to other countries where the collective is more important than the individual. In addition, the industry an employee works in may also be a factor. You cannot assume that people in an electrical factory represent employees in other industries. For example, it may be that if you work in an industry such as healthcare, that incidents of sabotage would be much rarer, as they cause direct harm to a person and levels of supervision much higher.
Validity	The study used a seven-point likert scale to measure an employee's reasons/justifications for sabotage.	One issue with a likert scale is the assumption that the 'gaps' between the points on the scale are equal, and that everyone interprets a number on the scale the same. This may not be the case as one person may see a '5' on the scale very differently to another person. This lowers the validity of the results as we cannot be sure whether their total score on the methods/reasons questionnaires are accurate and a fair reflection of their attitude towards sabotage.
Reliability	All participants were given the same structured questionnaire and completed using the same 7-point likert scale.	A likert scale produces quantitative data which can be used for statistical analysis and compared between groups (and even occupations) increasing the reliability of the study.
Ethical issues	Participants were deceived about the purpose of the research.	Participants were told that the results were going to be used for a seminar, which was not the case; therefore, deception was used. However, all responses were completely confidential with no identifying features in any of the questionnaires. Also, sabotage is an illegal act which can cause harm and/or criminal damage so do the researchers have a moral duty to report on anyone who may suggest that they are completely supportive of sabotage?
Individual and situational explanations	Giacalone and Rosenfield suggested that both individual and situational factors need to be researched further to look at the impact of both.	Giacalone and Rosenfield suggested that future research should concentrate on individual differences (individual) in how employees justify acts of sabotage. However, workplace conditions (situational) should also be subject to future research as there may be certain conditions (such as poor conditions/pay/structure) that may lead to an increased risk of sabotage, and if identified these can be minimised/resolved.

	Discussion of issue	Impact on psychological understanding
Application of psychology to everyday life.	The results of the research may help employers identify people who are performing acts of sabotage and also improve safety in the workplace and increase profitability. Based upon real acts of sabotage.	Giacalone and Rosenfield saw their research as only the start of trying to understand why sabotage occurs, and the type of person who may be involved in it. They believed that further research was needed to understand the relationship between justification of sabotage, and the likelihood of someone either performing or reporting it. They believed that, with further research, results could lead to improved identification of those at risk of performing acts of sabotage. Further strategies could also be put in place to encourage the reporting of such acts. In addition, the fact that the construction of a questionnaire was based upon real life acts of sabotage increases the ability to apply the results to real life.
Reductionism versus holism.	The research reduced reasons for sabotage down to a list of 11 which were the rated quantitatively.	Simplistic to suggest that reasons for sabotage can be reduced to a list of specific factors such as 'just for fun'. Reasons for such a personal and damaging act are far more complex than scores on a likert scale, and a range of different factors need to be looked at to increase understanding of sabotage and prevent it from occurring.
Idiographic versus nomothetic	The use of self-reports/questionnaire suggest a more nomothetic method was used which may not be appropriate in this case.	Self-reports/questionnaires look for general trends/laws which can be applied to a wider population. However, sabotage is an act that can cause an immense amount of damage to both individuals and companies, and to look for a general trend in something so sensitive and personal may be impossible as everyone may have a very different reason. Perhaps the use of more focused, qualitative methods may be more appropriate, i.e., focus groups/unstructured questionnaires or interviews which are more idiographic.

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