

Teaching research studies

Cambridge
International
AS & A Level

Cambridge International AS & A Level
Psychology

9990

Cambridge Advanced

 **CAMBRIDGE**
International Examinations

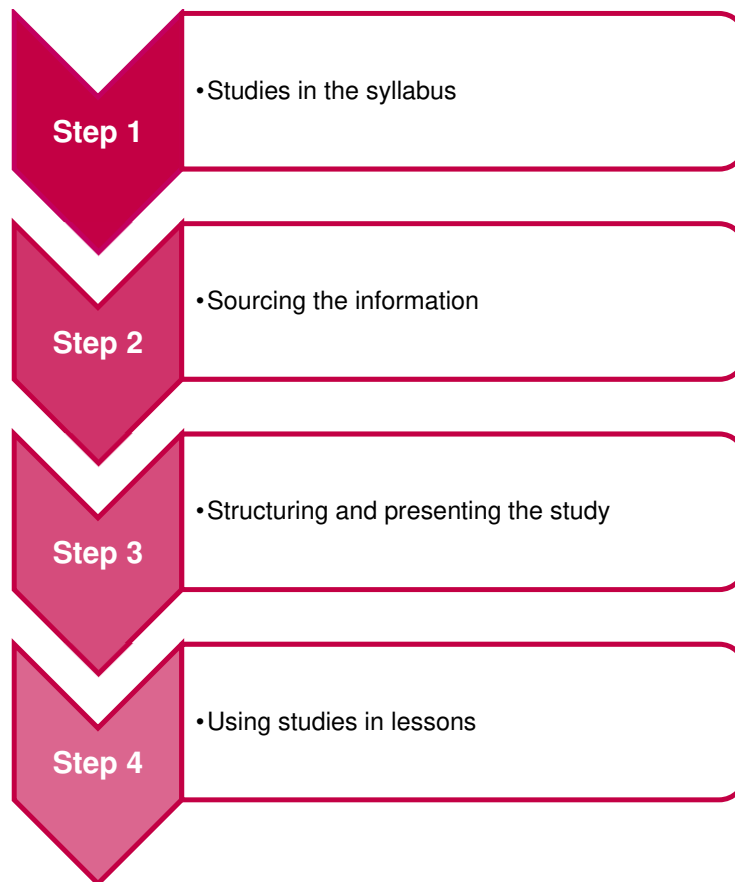
Cambridge International Examinations retains the copyright on all its publications. Registered Centres are permitted to copy material from this booklet for their own internal use. However, we cannot give permission to Centres to photocopy any material that is acknowledged to a third party even for internal use within a Centre.

© Cambridge International Examinations 2016 Version 1

Introduction

An essential part of teaching psychology is the delivery of core studies (AS 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 document is intended to be a step-by-step guide for teachers designing and delivering the AS & A Level Psychology (9990) 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 you to help 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 core study or study summary. They can be an invaluable resource to use within the classroom, as homework or for practising 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 of the core 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 of the 12 core studies. At A Level, the syllabus states 'an overview or general summary 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 bias
- reductionism
- psychometrics
- determinism
- longitudinal research

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 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 about brain scans can be found here and can support learner understanding of the study by Canli et al:
www.resourcd.com/@psychexchange/file/show/15624

This is a useful video about the mental processes of cognition:
www.youtube.com/watch?v=rIIMVv7ksTg

This website offers information on all forms of behaviourism:
www.simplypsychology.org/

Quizzes and other activities can help to reinforce understanding and improve recall. Activities on Milgram's study can be found here:
www.holah.co.uk/summary/milgram/

A useful PowerPoint that summarises why abnormality is hard to define:
www.resourcd.com/@psychexchange/file/show/6615

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 their knowledge of the design including the purpose of the study, aims, procedure and results. An example of how learners use studies in the examination is shown on later pages.

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 and many of his peers 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 a knowledge and understanding in relation to aspects of the procedure. This includes the methods used, the sample, and any ethical issues. Where multiple variables are measured and manipulated these should be made explicit to your learners, as should how these were operationalised by the researcher. In making these elements explicit, learners are able to discuss whether the researcher has reliably manipulated and tested the variables to produce valid results or whether confounding variables have occurred during the course of the research.

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 where the strengths and weaknesses of the research lie. Your learners need to be able to explain the effect these may have on the way we use and interpret the findings from the studies.

Study sections

Background

The background to the study is likely to include links to prior research and the understanding of a psychological concept prior to the research. 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.

Step 3

Structuring and presenting studies at A Level

In Papers 3 and 4, learners are required to know a range of psychological research. There is a greater emphasis on the role of studies in furthering our understanding of psychology compared to AS Level.

As such there is less focus on the fine details of the research and more emphasis on the impact of the decisions made by the researcher and what conclusions can be drawn. 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 focuses 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 of the same categories learners will be familiar with from AS Level. You will notice that the A Level example 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.

The use of study summaries in relation to the specialist options will enable learners to develop arguments about the effectiveness and nature of the research. For example, in Paper 3, Psychology and Health, learners are asked to evaluate what psychologists have discovered about the sources of stress, including a discussion of individual and situational explanations. Therefore, learners should give a judgement about whether individual or situational explanations are more effective. This judgement should be based on their examination of psychological research. 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 make direct comparisons between research or make links between results and specific explanations. If a journal article is cited in other psychological research this is a useful path to access alternative research or more recent developments in a given area of study.

AOs

With regards to psychological themes, theories, terminology, concepts (ideas and processes), methods, studies 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 situations and real life and theoretical contexts

AO3 Analysis and evaluation

Analyse, interpret and evaluate psychological information, ideas and evidence

Step 3

Comments

Using studies in an examination

Evaluate the study by Schachter and Singer (two factors in emotion). [10]

Schachter and Singer created two conditions of opposing emotion states – euphoria and anger. They directly manipulated the situation by injecting groups of participants with epinephrine and then leaving them with a confederate who acted in an angry or euphoric way. A problem with the design of this study is that participants' responses may vary due to the nature of being injected. Although they agreed to the injection the variations in anxiety with injections between participants might have impacted the recording of euphoria or aggression and affected the internal validity of the study. Furthermore, the manipulation of 'cognitions available' to the participant was affected by the confederate and was reliant on them being able to convincingly portray emotions. If the confederate was unconvincing then the participant's responses on the questionnaire may be invalid and the result of demand characteristics. However, participants were asked about their suspicions with 11 subjects' data being discarded suggesting that the impact of this was minimised.

Schachter and Singer conducted their study with 184 participants. This is a large sample meaning it is likely to be more representative of responses to physiological arousal and cognitive explanations. However, the generalisability of the sample was limited as all the participants were male and the likelihood of being influenced by the confederate could be different in females. The sample was also made up of psychology students who volunteered as part of the requirements of their course. They may be more likely to show demand characteristics and try to work out the aims of the research.

The main ethical issue of this study is deception as the participants were told that they were participating in a study investigating the effect of vitamin supplements on vision. The participants in the adrenaline misinformed and adrenaline ignorant conditions were also not told about the side effects of adrenaline. For some participants this may have made them feel concerned or frightened if they experienced these. However, the researchers were justified in their decisions to deceive the participants in order to objectively test their aims and it would have been impossible to do so unless they were deceived.

Note that although the candidate gives a brief overview of the study, they do not make the mistake of simply 'retelling' the whole experiment.

AO1

Here the candidate is able to apply their knowledge of research design by offering a critique of the experiment. They do recognise how the authors of the paper have attempted to address some of the issues they raised.

AO1 and AO2

Here the candidate evaluates the effectiveness of the study. They have considered key ideas such as generalisability and the effect of demand characteristics to assess the study.

AO1, AO2 and AO3

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.

Step 4

An example of 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. This 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 loud 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 time. Participants were never informed if their eyes had been moving when woken up.

Tasks:

- a)
- b)
- c)

Noting the tasks participants were asked to perform could inform your classroom discussions about issues such as ethics 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 narratives, pattern of eye movements

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

Results

- a)
- b)
- c)
- d)

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 experienced REM every night. Dreaming is most often experienced in REM although not exclusively with the pattern of eye movement representative of what is being dreamed of.

Step four

An example of using an evaluation table

At A Level, the focus is much more on the way the studies illustrate ideas and concepts. To prevent learners from simply repeating the details of the study in the exam, using an evaluation table can help them to summarise the key points from a study. An example of how you may use one with learners is shown below.

	Discussion of issue	Impact on psychological understanding
Methodology	Self-report methods with a Likert scale	Measurements are estimations rather than a discrete likelihood and may not reflect the true nature of participants' beliefs. <i>Social desirability</i> may account for the increase systematic bias in positive life events.
Reductionism	Many factors were looked at in relation to the events	A <i>holistic</i> investigation of consideration has been carried out using <i>multiple regression analysis</i> in order to estimate the relationship between several <i>independent variables</i>
Validity	Each statement has to be clearly positive or negative The with The from Use gro
Reliability	A n cha eve stu affe tha
Real world application	Und spe	Could be used to reduce myths and increase the likelihood of specific groups self-checking for medical conditions such as breast cancer
Participants	The spe hav chara
Approach	Cognitive approach as motivations and beliefs are investigated.	This ignores the role other approaches may play in explaining this phenomenon.
Extraneous variables	There may be a greater commitment to achieve specific outcomes or personal goals.	This shows the impact of free will and motivations on human behaviour which may affect the likelihood that expectations are desirable.

By completing this section for learners to begin with, learners can focus on the higher order thinking involved in completing the next column.

As learners become more confident, you can provide them with less information in this column.

Learners can be asked to complete these sections on their own or in pairs. To begin with you might provide them with information to help them complete these sections.

In this example some sections are completed to model what learners need to do.

Tables like this encourage learners to think about the impact of the study, rather than just the detail of the procedure.

Example AS Level study – the social approach

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

Piliavin et al. (subway Samaritans)

Piliavin, I. M., Rodin, J. and Piliavin, J. A. (1969) Good Samaritanism: An underground phenomenon, *Journal of Personality and Social Psychology*, 13, 4, 289-299.

Background

The murder of Kitty Genovese triggered interest in the action of bystanders and the nature of 'diffusion of responsibility'. This suggests that bystanders are less likely to come to someone's aid if group members are strangers. Previous work had been conducted in a laboratory setting where participants only heard the victim.

Aim(s)

To study the factors affecting helping behaviour. The variables were: the type of victim (drunk or ill), ethnicity of victim (black or white), the speed of response to help the victim, the number of responses to help the victim and the ethnicity of the helper.

Procedure

Method: Field experiment using the New York City subway in order to have a captive audience.

Sample size: 4450 men and women using the New York City subway

Experimental design: Independent group design. Participants only took part in one condition.

Controls: Broadly similar time frames and days, trial run on one type of subway car, the victim's actions and gender were standardised, when the model helped was at a given stop, no model condition, nonstop ride that passed through additional stations.

Tasks: The location of the car varied each time. All the researchers got on the subway from different doors. The female confederates sat down outside the critical area. During the journey the victim would stagger forward and collapse. If the victim received no help then the model would help him to his feet. When the model intervened he raised the victim to a seated position and stayed with him for the rest of the subway journey. One observer recorded the race, sex and location of all passengers in the critical area (near the victim), the total number of passengers in the car and the number that helped. The other observer recorded the same information for the passengers in the adjacent area.

Measured variables: The speed and number of responses, ethnicity of the helper

Manipulated variables: The type and ethnicity of victim

Results

- a) The victim was helped frequently. The ill victim was spontaneously helped (without the intervention of the model) in 62 of the 65 trials. In the drunken condition the victim was spontaneously helped in 19 of the 38 trials.
- b) The effect of spontaneous helping was essentially the same for each ethnicity.
- c) In 60% of trials where the victim received help more than one bystander offered assistance. There was no significant difference between black and white victims or between the ill and drunken victim. The presence of a first or initial helper was significant to the number of additional helpers offering assistance.
- d) Men were considerably more likely to help than women. 90% of spontaneous first helpers were male.
- e) There was a slight tendency towards *same-race helping* meaning that white victims tended to be helped by white helper and black victims by black helpers. Same-race helping was more common in the drunken condition than the the ill victim.
- f) There is no strong relationship between numbers of bystanders and the speed of helping. Response times in the study were generally faster for groups of 7 or more people compared to groups of 1 to 3 people.

Conclusion

Diffusion of responsibility was not found in this study given that response times were quicker for cars with greater numbers of people. These findings contradict previous research about the actions of bystanders. However, the longer the emergency continues without assistance being offered, the less impact the model will have. In this case, bystanders are more likely to leave the area and to then discuss the incident. The nature of helping may be reflective of the level of empathy or trust towards the victims. This could help to explain the ethnic differences in bystanders' behaviour. Individuals may not help because of the costs helping may have on them.

Example A Level study – psychology and abnormality

At A Level, the focus is not on the details of the study but rather what it might tell us about this element of psychology. The whole study is only shown here to demonstrate how this might lead to an evaluation sheet that would help learners summarise the key points.

Lovell et al. (cognitive treatment of obsessive-compulsive disorders)

Lovell, K., Cox, D., Haddock, G., Jones, C., Raines, D., Garvey, R., Roberts, C. and Hadley, S. (2006) Telephone administered cognitive behaviour therapy for treatment of obsessive compulsive disorder: randomised controlled non-inferiority trial, *British Medical Journal*, 333, 883-886.

Background

Graded exposure and response prevention (ERP) has been found to be effective in treating OCD but this has long waiting times which prevent access to treatment.

Aim(s)

To compare the effectiveness of ERP delivered by phone and face-to-face treatment.

Procedure

Method: Participants were assessed using self-report techniques using questionnaires to measure the severity of their OCD, levels of depression and satisfaction with the treatment. Participants were given two baseline assessments prior to treatment.

Sample size: 72 participants completed baseline assessments with 36 in the telephone group and 36 in the face to face group, aged 18–65, from Manchester outpatient units.

Sampling technique: Opportunity sampling.

Experimental design: Independent groups design with different participants in each condition

Controls: Single-blind study (the researcher assessing patients unaware of which condition they were in); exclusion of some participants including those with severe depression with suicidal intent, substance abuse and those who had been on antidepressants or anti-anxiety medication; trained and experienced therapist.

Tasks: Face to face intervention was delivered in 10 one-hour sessions on an individual basis. During this they created a hierarchy of fears, identified and encouraged the practice of target setting. Progress was monitored by patient progression on homework sheets and problem solving tasks. Telephone therapy was delivered after one face to face session and included 8 weekly calls up to 30 minutes. Patients had homework sheets sent to them and the therapist had the same role. Participants were given the Yale Brown scale and Beck's index immediately after treatment and were followed up at 1 month, 3 months and 6 months. Satisfaction was assessed immediately after treatment.

Measured variables: score of Yale Brown scale, score on Beck's index, satisfaction score.

Manipulated variables: telephone or face to face therapy.

Results

4 patients did not complete treatment and 3 lost to attrition. The rating of patients' OCD was severe at the start of treatment and differences between the baselines of groups were not statistically significant. Participants had a reduction in symptoms moving on average from a marked Yale Brown score to a mild one in both groups. Telephone based treatment was as effective as face-to-face at all four assessment points. Telephone based treatment was clinically relevant (reduced by 2 standard deviations or more) in 77% of patients and 67% in face to face treatment.

Conclusion

Telephone based ERP was as effective as face to face based treatment and patients reported similar levels of satisfaction making this a viable alternative to face to face treatments.

Example A Level study – psychology and abnormality

The sort of evaluation table shown below may help learners to create a summary of the study. Using a table should prevent them becoming distracted by the detail, allowing them to assess the implications of the research.

	Discussion of issue	Impact on psychological understanding
Methodology	Self-report techniques used to measure the severity of OCD, experiences of depression and satisfaction which could result in social desirability	The fact that participants were accessing treatment may explain the positive clinical outcomes. It could be explained due to participants rating the severity of their symptoms higher than they actually were at the beginning, creating a more positive effect.
Reductionism	Only one therapeutic technique, ERP, was assessed in the study and there was no comparison to other disorders or physiological therapies	Using ERP in conjunction with drug therapies might have created a more significant reduction in symptoms. This would be appropriate for individuals with severe scores on the Yale Brown scale and those with comorbid disorders, which are prevalent issues for patients with OCD.
Validity	Placebo effect not accounted for as the study did not have a control group Lack of blindness in the assessor – 9 patients revealed their treatment status and the assessors guessed 67% correctly Follow-up only to 6 months	Being given a therapeutic technique may have inherently decreased the severity of symptoms due simply to the effect of having a therapist focused on the individual's needs. The positive clinical outcomes could be demand characteristics by the assessor as it was evident to them which condition participants were in. The 6-month follow-up limits the effectiveness of the treatment. Improvements may have only been short-term.
Reliability	The scales are standardised	The use of objective measurement allows for comparison between conditions and improvements. However, participant scoring may be subjective in terms of assessing the severity of their OCD.
Real world application	Satisfaction may be important for individuals in order for them to comply with treatment This was cost effective with greater accessibility to treatment due to a 40% saving in therapist time.	This may correlate to a more effective treatment and prevent relapse. The positive results from the telephone therapy could mean a greater number of individuals being treated. This could reduce waiting lists and prevent the escalation of the severity of symptoms prior to treatment starting.
Participants	The sample of patients was proportional and demographically similar in terms of the severity of their symptoms to other studies Attrition rates (10%) were not as significant as in other studies investigating the effectiveness of CBT	The study was representative of individuals with OCD and suggests that the use of telephone based ERP could be an effective treatment strategy. In the study by Tolchard and Battersby (2013) attrition rates were significant at 30%. The positive satisfaction levels and the nature of OCD mean that sufferers could be more likely to seek help. Further studies would be needed to see if the same results occurred with other disorders.
Ethical issues	Both groups were given treatment	By treating all participants the researchers prevented the risk of harm due to increased severity of symptoms.
Approach	Cognitive as clients work through more rational responses to obsessions	Ignores biological causes of OCD such as damage to the caudate nucleus and the worry circuit which may respond to rationalisation.
Extraneous variables	Fixed mind set and unwillingness to change would prevent patients from engaging with aspects of ERP	These individuals may have been excluded from the study and prevented by the experienced nature of the therapists in both conditions which may be a confounding variable.
Alternative research	Kim et al. (2001) conducted a study comparing Naltrexone with a placebo. They found that 75% of subjects in the drug condition were rated as much or very much improved compared to 24% of those in the placebo condition.	

Cambridge International Examinations
1 Hills Road, Cambridge, CB1 2EU, United Kingdom
tel: +44 1223 553554 fax: +44 1223 553558
email: info@cie.org.uk www.cie.org.uk

