

# Report of the Working Party on Conducting Research on the Internet

Guidelines for ethical practice in psychological research online

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# **Executive Summary**

The term Internet Mediated Research (IMR) covers a wide range of research activities ranging from purely observational studies to surveys and *in vivo* quantitative studies to highly structured and well-controlled experiments. These guidelines supplement, rather than replace, the general ethical principles of the British Psychological Society (BPS, 2006), to allow for the additional ethical and practical issues inherent in IMR. Depending on the research design, participants in IMR can be identifiable or anonymous; they can explicitly consent to participate, or they can be invisibly observed without their knowledge. These two key dimensions (level of identifiability and level of observation) form the basis of the guidance offered in this document. Ten issues inherent when researching online are discussed. These are: verifying identity; public/private space; informed consent; levels of control; withdrawal; debriefing; deception; monitoring; protection of participants and researchers; and data protection.

# Introduction

Advances in technology, such as the internet, have extended opportunities for research in psychology. The term Internet Mediated Research (IMR) covers a wide range of activities. It can range from purely observational studies (e.g. analysis of behaviour of people in chat rooms), to surveys and in vivo quantitative studies (e.g. a comparison of the personality profiles of job applicants and employees) to highly structured and well-controlled experiments (e.g. a psycholinguistic lexical decision task). IMR requires the application of the same controls, checks and balances that apply to good research in traditional settings. It should also involve the same ethical considerations being given to people who are taking part in the research, whether they are simply being observed or are invited to actively engage in experimental tasks or activities (see Hewson, 2003, for an introduction to IMR). However, IMR brings additional ethical issues.

These guidelines supplement rather than replace the general ethical principles of the Society (BPS, 2006), to allow for the additional ethical and practical issues inherent in IMR. They are offered for psychologists and those who wish to conduct research online, while acknowledging that the variety of research designs, approaches and perspectives means that there can be no definitive set of rules to be adhered to. Researchers should be guided by the core requirement for the 'application of technical competence and the use of ... professional skill and judgement' (*Code of Ethics and Conduct*, 2006: 5). It is the researcher(s)'s responsibility to conduct research in ways that do not bring themselves, their institution or the Society into disrepute and that adhere to the law and any additional codes of practice governing work published internationally (such as those offered in the EFPA [European Federation of Psychologists Associations] metacode on ethics: www.efpa.be). Researchers need to be aware that research conducted online is often accessible by an international audience and can not generally be contained within national boundaries.

The different methodologies used in IMR necessarily give rise to additional ethical issues, beyond the core Society (2006) guidelines. In the case of IMR, the most salient and critical feature is the absence of physical contact between researcher and participant. This restricts the researcher's capacity to monitor, support, or even terminate the study if adverse reactions become apparent. For example, experimental research online requires careful consideration of the design of stimulus materials to anticipate possible distress that might go undetected and qualitative analysis of discussion boards requires an awareness that the author of quotations can be identified by using a search engine.

This document does not provide full coverage of methodological aspects of IMR, research design, sampling strategies, protocols or validation of psychological measures. However, we emphasise that poorly designed studies can be considered unethical if these aspects are ignored. Such studies are likely to produce invalid results, which can waste the resources both of researchers and participants. In all research, the best designs are those which will enable researchers to maximise research outcome

obtained whilst minimising the call on participants' time and other burdens requested of them. We alert readers to possible additional methodological pitfalls associated with IMR published elsewhere. For example, methodological aspects are introduced in Birnbaum (2004) and Hewson (2003), research designs by Bartram (2005), sampling strategies by Birnbaum (2004) and Ekmann *et al.* (2006), protocol validity by Johnson (2005), Reips (2000), Schmidt (1997), concerns about validating psychological measures online by Buchanan *et al.* (2005) and concerns about observation and 'lurking' by Brownlow and O'Dell (2002). While some elements of good practice for ethics in IMR apply to all, or most, research contexts, the relevance of other aspects must be judged by individual researchers and by ethics committees, with decisions applied as appropriate to the specific research context at hand.

# Key ethical issues in Internet Mediated Research

Depending on the research design, participants in IMR can be identifiable or anonymous; they can explicitly consent to participate, or they can be invisibly observed without their knowledge. These two key dimensions (level of identifiability and level of observation) form the basis of the additional ethical issues raised by IMR. In Table 1, we show these dimensions as a typology housing ten broad areas of ethical consideration. Researchers may wish to decide where their study fits into this typology. The specific issues raised will be determined by the research design, but the general issues are guided by the two principal dimensions. The numbers correspond to the ten subheadings below.

**Table 1**Typology of four types of IMR studies and examples of ten ethical issues raised

PARTICIPANTS	Identifiable	Anonymous
Recruited	Verifying identity Informed consent Withdrawal Data protection	Levels of control  Monitoring the consequences of research  Protecting participants and researchers
Unaware	Deception	Understanding of public and private space Debriefing

# 1. Verifying identity

An obvious difference in psychological research conducted online is that the participants and researchers are not physically brought together when taking part in the research. Therefore it is difficult to verify the identity of research participants. The potential impact of this issue will be related to the design of the research and the degree to which the nature of the study makes it critical to confirm the actual identity of the participant, or particular participant characteristics (such as gender or age). Researchers may employ a variety of mechanisms in an attempt to authenticate participant identity such as checks made by credit cards, banks, using passwords, or registration of an e-mail, user name and/or password. However, whilst these mechanisms may diminish the extent of fake identity, they are not failsafe and necessarily involve additional costs and time, as well as generally lowering the number of participants willing to take part.

Researchers need to be aware of the difficulties in verifying identities online in the design of the research and the evaluation of risk and ethical practice. If it is essential to know the exact identity, or to constrain the range of participants taking part (for instance to exclude vulnerable or underage individuals), then IMR may not be appropriate. The extent to which one can verify identity depends on the mode of access used. Later in these guidelines, the differing degrees of control over the authentication process are discussed.

# 2. Public/private space

The distinction between public (e.g. an internet site) and private space (e.g. the person's home) is increasingly blurred, mainly due to the introduction of new technology. On the internet, this blurring is extended to an extreme because much internet communication is conducted in both a private and public location simultaneously. Moreover, a communication perceived as private at the time (e.g. a posting to a USENET group) might become public at a much later date, when the archive is made publicly available (as happened with USENET). The aggregation of data points also poses a threat to privacy, as witnessed with the release for research purposes of anonymised search data by AOL that enabled individuals to be identified through the combination of their search records (see http://news.bbc.co.uk/1/hi/technology/5255732.stm).

Not only is internet communication often effectively public through greater visibility, traceability and permanence, but research conducted online is more publicly accessible and leaves permanent records of communications that in a face-to-face situation would be transitory. Researchers should be aware that participants may consider their publicly accessible internet activity to be private, or indeed the communication may even have been private when it was first conducted. For instance, while personal web pages may seem to be public documents, copyright remains with the author or web hosting company, and indeed many authors ask to be informed if a link is made to the page (see Ess, 2007). Under these circumstances, it may be prudent to seek consent if considering the analysis of such data. E-mailing research participants can also be problematic. When recruiting participants by e-mail researchers need to be aware of, and comply with, current legislation regarding unsolicited 'spam' e-mails. In addition, the security of unencrypted e-mail is low, and e-mail content can be inadvertently disclosed on the internet, local and other computers (Car & Sheikh, 2004). Therefore, even the common practice of e-mailing research participants can, in principal, be problematic. Psychologists risk breaching participant or patient confidentiality if they use non-secure e-mail in research or practice.

The Society's general ethical guidelines note that, unless consent has been sought, observation of public behaviour needs to take place only where people would 'reasonably expect to be observed by strangers' (*Code of Ethics and Conduct*, 2006: 13), essentially vetoing observation in public spaces where people may believe that they are not likely to be observed. Researchers should respect participants' expectations of privacy and consider the extent to which observations may have potentially damaging effects for participants (Flicker, Haans & Skinner, 2004). Much qualitative research online involves levels of observation (e.g. analysis of interactions between individuals in a chat room) and should be guided by these general principles. However, it is strongly arguable that postings to both synchronous or asynchronous discussion groups, on the other hand, do not automatically count as public activity. When constructing research using discussion groups, any requirement for consent by participants obviously needs to be tempered by a consideration of the nature of the research, the intrusiveness and privacy implications of the data collected, analysed and reported, and possible harm caused by the research. The discussion group moderator or list owner can provide advice on the best ways to research these groups.

Researchers need also to be aware that it is impossible to maintain absolute confidentiality of participants online because the networks are not in the control of the researcher. For example, law enforcement agencies may subpoena research data (Coomber, 2002). Additionally, e-mail content may be stored by web hosting companies on several computers. Researchers need to consider ways in which participants are informed about the ways in which data they provide is electronically stored and transported, and the possibilities for breaches of participant confidentiality through the use of search engines and the accrual of data from multiple sources. Participants may not be fully aware of the degree to which their postings are already available to public scrutiny. The researcher should be clear about the extent to which their own collection and reporting of data obtained from the internet would pose additional threats to privacy over and above those that already exist. It is about this additional risk that they need to consider and inform their participants about whilst also taking all reasonable precautions to safeguard the confidentiality of data that they hold.

There are potential threats to anonymity inherent within storing information electronically, for example where mechanisms for paying participants may give rise to breaches in online privacy or anonymity. An

additional breach of privacy or anonymity may occur if qualitative researchers report quotes that may be located by search engines. Researchers should avoid using quotes that are traceable to an individual's posting via a search engine unless the participant has fully understood and consented to this. Instead, they could consider the use of composite 'characters' for analysis, and the paraphrasing of quotes, if this is consistent with the research design. Specifically, the address of the website or discussion forum from which any data is gathered should not be published alongside any analysis of communication sourced from that same site. The pseudonyms used by posters to communication forums should be treated with the same ethical respect as a researcher would treat a person's real name. In cases where direct quotations are necessary to the research methodology (for instance, in conversation or discourse analysis), then the consent of those sampled should be sought.

#### 3. Informed consent

As in all research environments, special care needs to be taken when seeking informed consent from children or those who may be vulnerable to coercion (Mathers, Howe & Hunn, 1998). In traditional research settings there are situations in which one might need to invoke a principle of dual consent, or dual by proxy, where an identified person in authority/carer/guardian is first required to give consent and then the subject of the study gives consent. In such instances research cannot proceed without both consents. The dual consent model is open to abuse, even when the researcher is present (Mathers *et al.*, 1998), and given the additional constraints arising through IMR the suitability of IMR for these groups of people needs careful consideration. The key issue is to ensure that general ethical principles are adhered to including overcoming difficulties in verifying identity online to ensure genuine informed consent. Although problematic, research with such individuals should not necessarily be excluded provided additional safeguards, such as supervision at some point in the process, ensures suitable and sympathetic addressing of the issues of consent.

The process of recruiting volunteers for studies that ask for a specified contribution (such as performing a task or completing a questionnaire) necessarily entails some form of consent in order to bring participants and the task together. With conventional research, this provides an opportunity to check that the nature of the task has been understood before proceeding (informed consent). However, as explained later, it is both possible and indeed relatively usual for individuals to access web sites without reading instructions, explanations or terms and conditions. Participants may nominally give consent but without actually reading the relevant information. In this sense, consent is provided but it is not informed consent. In other (non-IMR) contexts consent to use data may be sought after the event. In IMR this arrangement is not reliable as the researcher can be caught unawares if the participant leaves unannounced before consent has been obtained and is subsequently untraceable. This does not mean that obtaining informed consent is impossible via the internet, but it does impose special constraints for which particular techniques can provide partial solutions. As an example, if the material in the study is unsuitable for participants under 16, and consent would not be valid from such a participant without additional support from a guardian or similar, then skip logic or conditional branching could help. Skip logic and conditional branching allow online material to change, depending on respondent's answers to certain questions, such as age. They can filter some individuals away from exposure to the sensitive material, and they can be invisibly diverted to innocuous or more benign versions of the task. By answering questions about their age, or age related activity (e.g. driving legally) software features can adjust all subsequent material presented. This type of customising of presentations can be helpful for all participants when different versions of the procedure are to be used. It allows each individual to view only one version of the consent information, tailored to their needs, reducing the load and making it more likely that the information is absorbed rather than ignored.

In research, the principle of participant autonomy is protected by ensuring that any consent to participate in the study is informed or 'real' (Mathers *et al.*, 1998). Therefore, there are a number of issues concerning IMR over verification of identity and 'real' informed consent. As previously discussed verifying identities online is problematic. The age of the participant cannot easily be verified online and researchers cannot realistically prevent under 16s participating in research projects. Researchers may also review whether their research is better suited to a face-to-face presentation rather than online if there are concerns about the presentation of inappropriate material to particular individuals (for example,

presenting explicit or sensitive material where there is a possibility of the material being viewed by underage participants).

#### Participant information

In principle, an effective way of ensuring the necessary information is available prior to consent is to display an information sheet on the entry to the study, with a consent form at the bottom or on an additional page. The information sheet should also display the researcher's full contact details. However, as discussed above, researchers should be aware that the information sheet may not be read or fully understood. It is common for internet users to be presented with sometimes lengthy text detailing such features as terms and conditions of use for software or downloads. They regularly skip or ignore these and agree to statements (e.g. consent, terms and conditions) without having read/understood them. It is not necessary or desirable to include excessively lengthy warning of all possible and imaginable harms in informed consent procedures, given that excessive wording is likely to exacerbate the tendency to notionally agree without reading (Birnbaum, 2004). The participant has made a choice not to read the information; if this is not desirable for the research then additional steps could be considered to ensure that the participants are able to make appropriate choices.

#### **Feedback**

As part of initial recruitment and consent procedures participants should know what kind of feedback they will receive. Where research involves psychological testing (such as personality, intelligence, emotionality) care should be taken about how (and whether) scores are divulged and how their meaning might be interpreted by participants. As discussed below, results from psychological tests administered online may not be valid (Buchanan *et al.*, 2005). The ability to check participant understanding is limited at a distance and this can be a particular issue if distress or loss of confidence, or even overconfidence, could potentially arise. For this reason, it is often wise to withhold detailed personalised feedback and provide only generic information about the purpose behind the study.

#### 4. Levels of control

A key distinction between traditional research contexts and researching online is the degree of control (or lack of it) over the research environment. In IMR researchers do not have control over who the participants are, the environmental conditions they are responding under, variations in the research procedure due to different hardware and software configurations, what other activities or distractions are taking place simultaneously, participants' feelings and motivation and how they react to the research materials.

There are instances in which the need for control is evident and important for the research, for example in some forms of online psychometric testing where high levels of control and veracity are essential. Here there may need to be some direct human supervision, whereby the identity of the test taker can be authenticated and test-taking conditions validated. This may be achieved by requiring a test administrator to log-in the candidate and to confirm that the testing was completed correctly at the end of the session and may involve dedicated testing centres (Bartram, 2005).

Other types of research design may lead to lower levels of control over participants, and stimulus materials. For example, experiments set up online can create less control over who takes part, depending on the sampling procedures employed (advertising on the internet probably leading to the lowest ability to select who takes part) and also, especially with more complex implementations, lead to greater scope for procedural variability due to the range of possible hardware and software configurations participants may be using. In designing experimental material researchers need to be aware of the potential sources of such variations, and aim to design studies that minimise this impact so that the validity of a study, and correct adherence to ethical guidelines, is not crucially affected. Similarly the issue can emerge in qualitative research, which may involve observation of pre-existing communication online and as such have very little control over the participants. In addition, there can be little influence over the physical environment under which respondents take part, such as noise levels, number of interruptions, etc. Researchers should be aware that participants may try to go back through a test or repeat it completely. There are mechanisms such as data forensics that may detect multiple test taking or interruptions although these will be applicable to some research designs and not all. It is also possible that some participants may deliberately

try to sabotage a study, e.g. by hacking into the system to view different experimental conditions, and the researcher should consider taking appropriate steps to minimise the potential for any such attempts where possible (e.g. see Hewson, Yule, Laurent & Vogel, 2003, for further advice on this issue).

#### 5. Withdrawal

In accordance with the general code of conduct for psychologists, online participants must have, and be aware of, rights to withdraw at any stage during a study. In the absence of physical contact between researcher and participant extra precautions may be needed in IMR since it is not possible to gauge participants' attitudes and concerns at a distance. Difficulties need to be anticipated and withdrawal procedures made clear and simple. Contact e-mail address(es) should be provided on information sheets presented both prior to and post participation to allow participants to contact the research team. However, caution should be exercised about exact details provided in order to preserve researchers' own privacy and safety.

The possibility of retrospective withdrawal may require additional mechanisms for storing large data sets in ways that would identify (to the researcher only) individual contributions to the research. The problem may not be unique to IMR but the solutions of tracing individual data that has otherwise been stored anonymously may differ somewhat for this format. Participants might be issued with ID codes to use to identify their contribution should withdrawal of data later be requested, and a strategy of a cut-off point after which participants know the data is fully anonymised, and therefore untraceable, can be employed. Care needs to be taken to ensure that such mechanisms are in accordance with current data protection legislation

Implementing procedures for ensuring data validity is also an ethical consideration. For example, in relation to withdrawal, asking the participant who exits by closing their browser mid-way through a study whether they want their partial data to be used, serves not only the purpose of maximising their chances of being appropriately aware of their right to withdraw, but also allows for a check on the validity of the partial data submitted, e.g. perhaps they answered in a haphazard manner, or were insincere in the responses they provided (a question such as 'is there any reason your responses should not be used?' may help reveal some such cases).

# Debriefing

Debriefing online may take the form of a debriefing page displayed at the end of the study. Researchers may also consider the possibility of providing feedback via telephone, e-mail or other means. For practical reasons however, researchers might wish to restrict themselves to research where debriefing can be adequately carried out with a short piece of text on a debriefing page. Participants should be made aware of the level of debriefing (e.g. whether they will be told test scores) as part of the informed consent procedure.

Researchers should explore the possibility of having the functionality to provide debriefing for participants who drop out before finishing the study. Debriefing should be available to participants who drop out before finishing the study. Ways of achieving this might include provision of the researchers' contact details, or placing a 'quit button' on each page, through which participants can terminate the study, that would trigger presentation of a debriefing page. Researchers should exercise caution in the debriefing information provided – information that is potentially distressing (or can be misinterpreted in a distressing manner) should not be presented. This is especially important because researchers are unlikely to be immediately available to counsel or further explain to participants disturbed or offended by the debriefing information (or indeed to know whether or not any participants are disturbed).

Researchers may consider making a summary of findings available on conclusion of the study. This serves both to extend the debriefing, and as a reward for participants. Dissemination of summarised findings may be achieved in a number of ways, perhaps most easily by giving participants a website address where the results will be posted by a given date.

### 7. Deception

Many psychology experiments use forms of deception, accompanied by later debriefing. There must be a clear and convincing argument for the use of deception online, which is only condoned if the research question can be seen to justify it. This would typically be determined in part by appropriate institutional ethics committees. In qualitative research the most likely instance of deception is in 'lurking' on chat rooms/discussion groups, etc. where researchers join a group as a member but use this to collect data. Other examples include publishing a website that misrepresents its aim. Strong justification is needed if the research involves deliberate misrepresentation by a researcher. In addition there may be difficulties with debriefing which, in most instances, would be required. Therefore researchers should consider carefully whether or not the research is best conducted online.

# 8. Monitoring

Researchers should be mindful that some manipulations may produce effects not easily negated by debriefing. This could be images, video clips or descriptive text, swear words or psychological measures such as mood inductions, threats to self esteem. Mood induction procedures administered via the Internet can produce emotional changes in participants and threats to self esteem can be manipulated by perceived performance levels which can cause an emotional response. In such circumstances, debriefing may not be adequate, and participants may withdraw without seeing it. For practical reasons, researchers may not be immediately available to discuss participants' experiences with them or intervene in other ways. Therefore, it is recommended that research materials that have a significant potential to cause distress, offence or have lasting effects on participants not be used in IMR. When material is presented that is somewhat sensitive, but not expected to create more extreme reactions than those normally encountered in the participants' everyday lives, it is to be recommended that researchers proceed with the same level of care and caution as in a face-to-face research study.

# 9. Protection of participants and researchers

Researchers must be clear about steps they need to take to safeguard the anonymity of participants' contribution to the project both online and in paper form. It is the researcher's responsibility to ensure that all information that would be needed by participants in order to have sufficient knowledge about the research is given in a clear, accessible and understandable form. This information may include details such as the average length of time taken to complete the study to allow participants who are using a 'dial up' internet access to anticipate the costs in money and time of being involved in the study.

To minimise missing data, whilst protecting participants' right to refuse to answer questions, researchers need to consider the presentation of their research online. For example, in the design of questionnaire material to be delivered online, researchers may need to consider answer options to allow for a 'prefer not to answer' response.

Researchers need to be aware of legislation concerning 'spamming' and act accordingly in using e-mail (or other forms of direct electronic communication) to make requests for participants. Researchers should be aware that steps to improve validity (e.g. using cookies, which are small pieces of data placed on the respondents' computer, checking IPs, etc.) can be constituted as an invasion of privacy. Participants may not be aware that they can take technical steps to protect their privacy, such as disabling 'cookies' in their browser.

Researchers need to consider how to present themselves via the internet in order to sensitively maintain professional boundaries online. For example, many psychologists have a personal as well as research related websites. Care should be taken to maintain a boundary between research/professional use of the internet and personal life, for example by using separate e-mail addresses for professional and personal use on the corresponding website. However it is recognised that researchers' work and personal lives may intersect (see Pipes, Holstein & Aguirre, 2005, for a discussion of the personal/professional distinction in psychology). Professional integrity in research practice can be maintained by understanding the potential for conflicting relationships and that professional/private boundaries can be difficult to manage.

The Society's ethical guidelines indicate that investigators obtaining evidence of problems of which the participant is unaware have a responsibility to act if they believe there are consequences for the participant's future well-being. Examples of situations in IMR where this problem might arise are administration of clinically-relevant psychological tests (e.g. measures of anxiety, depression, and personality disorders, etc.). This is particularly problematic when the tests have not been validated for online testing or in some forms of qualitative research (e.g. interactive online interviews, analyses of texts submitted by participants or posted in 'public' online spaces). In many current IMR research paradigms, the participant is likely to be unidentifiable and uncontactable by the researcher. In planning research, therefore, investigators must consider whether they are likely to encounter problems, and what course of action will be adopted if they do. A minimum strategy may be for debriefing information to include links to sources of support that participants may act on (e.g. in research on recreational drug effects, links to drug counselling organisations and advice to contact a healthcare provider if the participant has any concerns about their own wellbeing).

# 10. Data protection

Data protection legislation (Data Protection Act, 1998) has an impact generally on research conducted by psychologists, particularly around issues of storing personal data. Personal information can be processed during IMR, if participants consent to the processing of their data. This is a sufficient criterion to meet the requirements of the Data Protection Act (1998), according to the Information Commissioner. For research conducted on the internet additional issues need consideration. For example, researchers are required to lodge a notification of their research. These Society guidelines should not replace the responsibility of the researcher to ensure that they are following current Data Protection requirements, which are subject to change.

## Conclusion

In summary, Internet Mediated Research, along with most innovations, brings with it many advantages for the researcher but is accompanied by some corresponding constraints and disadvantages. Apparent or actual ease of obtaining/observing large numbers of participants, from a range of backgrounds is set against problems of verification of their identity and control over research conditions and privacy. Issues such as protecting potentially vulnerable participants from inappropriate or distressing procedures, and ensuring that they are able to give properly informed consent and that their confidentiality is maintained are all clearly of relevance to providing appropriate ethical codes of practice. Other shortcomings of internet research, such as lack of control of conditions and procedures, may not at first glance seem quite so central. However, in all research it is important to consider the wider implications of requesting volunteers to give up their time and effort to the research enterprise, even if they receive renummeration. If lack of control over the research environment and identification of participants leads to the collection of data that has no validity in the research community then issues such as wasting participants' time, and potentially bringing psychological practices into disrepute, step firmly into the realm that should be covered by ethical codes and guidance. The very nature of the speed of developments in information technology means that all eventualities cannot be anticipated and researchers need to be constantly alert to new potentials and pitfalls. However, the two key dimensions (level of identifiability and level of observation) shown in Table 1 (see p. 4) are likely to apply broadly to most IMR designs. It is hoped that the ten examples presented here will assist in highlighting relevant ethical issues and providing some helpful guidance.

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# The British Psychological Society St Andrews House, 48 Princess Road East, Leicester LE1 7DR, UK Tel: 0116 252 9568 Fax: 0116 247 0787 E-mail: mail@bps.org.uk Website: www.bps.org.uk