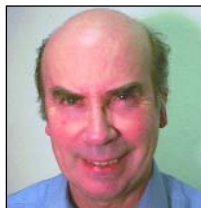


The use *and* of student

STUDENTS play a crucial role in research: some authors have even called them human 'fruit flies' (e.g. Keith-Spiegel & Koocher, 1985; Rubenstein, 1982). They are available in abundance, accessible and highly convenient to use. It is just so much easier than using populations outside the universities. Despite warnings about basing the scientific roots of our discipline on biased participant populations, research in psychology remains heavily reliant upon student participation.

Nothing much has changed in almost 60 years, since McNemar (1946) referred to the science of human behaviour as 'largely the science of the behaviour of sophomores'. According to Kimmel (1996), about 70 per cent of studies in personality and social psychology in recent decades, and about 90 per cent of perception and cognition studies, employ university or college students as participants. Something approaching 75 per cent of psychology departments in the USA and Canada have established student subject pools, with over 90 per cent of them drawing heavily on students in introductory psychology courses. We have not seen recent figures for the UK but they probably don't fall far short of these North American figures.

Two fundamental reasons are given why we should be concerned about this state of affairs. The first concerns validity and



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SANFORD on the practical and ethical issues involved in using students in research.

generalisability: the oft-cited worry that students are hardly representative of the adult population at large. Thus, student samples are inherently biased in age, experience, intellectual ability, ethnicity and social class. Despite frequent warnings from researchers themselves that their data cannot necessarily be generalised to the adult population as a whole, such research may pass into psychological folklore and become the 'received wisdom' without any serious subsequent attempt to replicate with a broader sample. As Korn (1988) has cynically questioned, 'do we really want to characterise psychology as a science based on the contributions of a captive population with little power?' (p.74).

If anything, the trend towards dumbing down the random or representative characteristics of participant samples in psychological research has become even more acute. As internal and external examiners, we have noticed with dismay the increasing tendency for student projects to be based on 'opportunistic' or 'convenience' samples, as if this releases the researchers from any obligation to think about the proper recruitment of their participants or from providing any explanation of their sample. 'I couldn't be bothered to select my sample in any kind of truly random or representative way, so I just accepted whoever I could get...!' Hardly what we were taught in traditional research methods classes.

The second reason why research on student samples should be of concern to us

is to do with what, if anything, students gain from the experience and whether they are unfairly coerced to serve as participants.

What do students gain?

In many academic institutions participation is a course requirement and may earn the



students 'credit' towards finishing their course, although this is probably less prevalent in the UK than in the US. Let us first consider the justifications for this participation, which are often framed in

WEBLINKS

BPS Code of Conduct:

www.bps.org.uk/documents/code.pdf

APA Code of Conduct:

www.apa.org/ethics/code2002.html

NHS ethics application: www.corec.org.uk

Ethical and legal aspects of research on the web:

www.aas.org/spp/sf1/projects/intres/main.htm

abuse

participants

terms of students (psychology students at least) having an obligation to make a contribution to the discipline that they are studying. As a longer-term objective they also stand to benefit educationally from the results of that research, and are themselves reaping the benefits of the outcomes of research from generations of students before them.

The more immediate pay-offs are that students are witnessing at first hand what research activity is like and, therefore, gaining a better appreciation of the scientific process. They will also be likely to learn from debriefing how the nature of their responses fits with the overall research aims and hypotheses. It is probably reasonable to say that no researcher is likely to justify their research on the basis that participants will learn something of personal significance about themselves, and most of us would regard it

as unacceptable and unethical if

researchers were to make this claim.

But, of course, we

cannot legislate against participants taking home their own messages about the significance of their own responses.

What is interesting is that a good number of surveys broadly demonstrate that students believe they have benefited educationally from participation and that they do find it a positive and useful experience, even when they were deceived (see Kimmel, 1996). They particularly favour research that is integrated into their own educational programme, or participation used in a concrete way to illustrate a psychological principle or an aspect of the scientific process. Of course, there is always the possibility that students give positive ratings to research in which they have participated in order to bolster their original decision to participate (post-decision dissonance!); but no hard evidence supports this.

Multiple use of students in psychological research has been criticised by some as engendering casual, uncaring and cynical attitudes; others (e.g. Schuler, 1982) have argued that the routine nature of participation for students has an ethical advantage: it is less stressful for participants, reduces the researcher's responsibility to some extent, and encourages the adoption of a 'partnership' role with the researcher. Whether researchers should have their responsibilities reduced and whether we want participants to adopt a partnership role are debatable points!

Ethical concerns

The ethical concerns of student participation revolve mainly around the question of coercion. Sieber and Saks (1989) surveyed 366 psychological departments in the US and found that some did not comply with professional and federal ethical guidelines for protecting students against coercion to participate. Indeed, only 11 per cent had subject pools

that were wholly voluntary – where there were no incentives or grades for participation and no penalties for non-participation. Contrary to American Psychological Association guidelines, most departments for whom research participation was a course requirement did not announce this in their course handbooks, prospectuses or recruitment literature. Only after students had registered for the course were they told that they would need to participate in research.

Although nearly all departments in the survey provided alternatives to subject pool participation, more than 70 per cent offered relatively undesirable alternatives, such as writing an essay or a class test of some kind. As Kimmel (1996) argues, such unattractive and time-consuming alternatives may leave students with little real choice but to participate in the research, no matter how unpleasant they find that option to be. The bottom line is that students learn very quickly that their departments want them and expect them to participate in research. This expectation, whether communicated implicitly or explicitly, may lead them to fear that their course tutors will downgrade them or penalise them in some way for not accepting the department's preferred option and research culture.

There are other aspects of recruiting students that are also potentially exploitative and ethically dubious. Recruitment announcements can be characteristically vague. They may be brief announcements in class coupled with the circulation of a register or sign-up form with specified times or request for contact details. Alternatively they may be notices pinned up in the department or more widely in the university campus to which students can respond. If there is a participation requirement for psychology students, then students may be more likely to sign up for one study and not another on



the basis of a convenient appointment time, rather than because they are making an informed choice about the kind of study they want to participate in. Often students will not really know what they are signing up to until they are sitting in front of the researcher being briefed about what is required of them. So, although a student can withdraw at the point of finding out what the research is really all about, this is not an attractive option because it is wasting the researcher's time and giving the impression that the participant is at best indecisive or, worse still, a troublemaker.

Under any ethical guidelines students should, of course, be informed of their rights, so that when they do know what the research is about, they not only give their informed consent but are also assured that they can withdraw from the research at any time without giving a reason. This is fine in theory, but in practice, as Smith and Richardson (1983) have hinted, it presents a paradox. On the one hand, the right to withdraw offers empowerment to the participant to leave at any time or to decline from responding to any part of the procedure. On the other hand, having given prior informed consent, the participant is under considerable pressure to live up to an expectation that they will see their participation through to the bitter end. So the process of informed consent may actually serve to disempower research participants, or at least cancel out the effects of right to withdraw.

Naturally this paradox is characteristic of any researcher-participant relationship, but the argument is that students have less power than 'stranger' participants because they are known and assessed by the department. Exercising the right to withdraw is difficult for students who

probably still have to face and interact with the staff involved in the research, however 'relaxed' those staff members may appear to be about the withdrawal. And nobody wants to run the risk of becoming the butt of departmental gossip, however unethical that would be!

The power relationship between academic researchers and their student participants may be exploited in other, less tangible ways. In their review of the use of deception Gross and Fleming (1982) noted that when research participants are offered rewards for participation (money, entry into a prize draw, course credits) they are more likely to be deceived than when they are unpaid and unrewarded volunteers. The implicit lesson is that offering rewards may

'the process of informed consent may actually serve to disempower research participants'

to some extent be treated by researchers as releasing them from any obligation to be wholly ethical with their research participants, because the payment effectively compensates for any embarrassment, discomfort or loss of self-esteem that participants may suffer. Students who feel that they are the victims of exploitation and develop a consequent loss of trust in psychological research may react in various ways, for example by becoming counter-compliant with what they believe are the researchers' expectations (Masling, 1966). They may also attempt to sabotage the experiment by disclosing information about the study to

other potential participants, having specifically been asked not to do so.

It is almost impossible to gauge the extent and impact of these kinds of potentially undermining participant reactions. Nevertheless, there is substantial evidence that there are no major differences between the data of reportedly suspicious and naive participants (Schuler, 1982). As we have already said, there is also considerable evidence that participants actually do not mind being deceived (Kimmel, 1998) and that they regard studies using deception as having educational benefit (Christensen, 1988). There is also evidence that they do not come to form suspicious subject pools which then transmit suspicion to subsequent generations of subject pools (Bonetti, 1998; Sharpe *et al.*, 1992). However, these considerations should not lull us into any sense of false security that using deception does not matter.

The way forward

Despite these rather gloomy ruminations, there are steps that can be taken to 'restore' an ethically more acceptable state of affairs if research participation is to remain a course requirement and yet not be seen as exercising unfair coercion. The solution is to create alternative course requirements that are in some way equivalent to research participation and then allow students freedom of choice. The principle of equivalence is important here – the justification for including research participation as a course requirement being that students learn something of benefit about the research process. Therefore, any alternatives to be made available should

- focus on research;
- involve some kind of active engagement with the research process;
- be commensurate in effort and time with a typical research participation session; and
- be no more or less aversive (or attractive) to most students than research participation.

Very usefully, Kimmel (1996) has compiled a list from various sources of 'equivalent' options to research participation that have been either suggested or actually adopted. The adjacent box draws directly from Kimmel's list with one or two minor variations in parentheses.

It is debatable whether these are equally attractive activities, and it is also debatable

ALTERNATIVES TO THE STUDENT RESEARCH REQUIREMENT

Suggestions adapted from Kimmel (1996):

1. Reading and summarising journal articles describing recent high-quality research.
2. Observing selected ongoing studies (subject to the researchers' approval).
3. Informal field observations of behaviour.
4. Viewing videotapes of laboratory experiments or filmed presentations of how an investigation is carried out.
5. Attending research presentations organised by graduate students (or by the department).
6. Assisting an ongoing research project for a specified period (e.g. data transcription and coding).
7. Engaging in volunteer community service activities.
8. Reading about the research process.

how educative they are about the research process (item 7 in particular!), but they do provide some guidance about other options that might be considered. Of course, a department might wish to offer a very modest selection of options, or else relatively few students might select the research participation option, which is, after all, the whole purpose of the exercise.

As already indicated, the emphasis on educational benefit is also crucial to the acceptance that research participation merits its place as an activity that can reasonably attract course credits. In Sieber and Saks's (1989) survey it was suggested that debriefing should be taken very seriously, and that researchers owe it to their participants to provide instructional feedback on the rationale, research design, hypotheses associated with the research, and how the data collected are expected to test the hypotheses. Further still, it was even suggested that participants might be questioned on what they had learned through participation or how they assessed the way they had been treated – which may be more aversive than participation itself!

Other course-related ways have been proposed of rewarding research participation without making it a course requirement. One department described by Sieber and Saks raised students' grades marginally for completing five hours of participation time (e.g. from C+ to B-). As long as other options are available for improving grades in this way, then it protects students from unfair coercion and avoids the problem of imposing a penalty for non-volunteers. There again, if we want to encourage students to participate in research without coercing them, there is nothing ethically wrong with out-of-pocket expenses or entry into a prize draw. We suspect that visions of upgrading student coursework marks will be anathema to most academic staff in the UK.

So, where does this leave us? There is a need to obtain some up-to-date information about what departmental practice currently is across the UK. The Society's Research Board has set up the Working Party on Ethical Practices in Psychological Research, whose remit is to draw up guidelines for setting up and operating departmental ethics committees. It is clear from the initial survey conducted by the working party that university psychology departments vary considerably in how they approve and monitor research ethically; some departments still appear to

have virtually no procedures in place at all. The initiative is certainly intended to offer guidance in establishing good practice across higher education and other establishments where research on human participants is conducted. And it also comes in the wake of the 2001 EU Directive to the Convention on Human Rights and the legislation on ethical standards in research that is to take effect from May 2004. This is not to mention the new governance arrangements for NHS research ethics committees, which will apply to all research involving NHS staff, patients, premises or facilities in any shape or form.

However, as we have just said, this working party is concerned entirely with the setting up and operation of departmental ethics committees and is not addressing departmental practice as far as the use of student subject pools is concerned. Yet the APA published guidelines about the ethical use of subject pools as long ago as 1982. These have addressed both recruitment practices and the problem of making research participation a course requirement. Should not the profession itself (via the Society) now consider a code of practice for the ethical use of subject pools? At the very least there does seem to be some moral imperative about the need to let students know if research participation is a course requirement before they enrol on a course. Similarly, if a course requirement is in operation, students might reasonably expect to know whether there are alternatives to research participation and what the nature of the alternatives is.

Whilst there are, therefore, some basic questions about whether we use our student participants effectively, fairly and ethically, there are also questions about whether we should be casting our net more widely. Should we move away from our over-reliance on students? We need more research on the use of the internet to trawl for research participants while maintaining control over our sample.

More broadly, we wonder if there are other issues arising from the use of subject pools on which we are failing to capitalise? For example, might not geographically adjacent departments share information about their pools? Might they not draw upon each other's pools from time to time, especially if it is logged that students have participated in research involving certain tests or procedures that might render them 'suitable' in another research context? Perhaps we could benefit from each others' practice, and reduce any burden on our student participants into the bargain.

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HAVE YOUR SAY

What do you think about the issues raised in this article? If you are a student, has your experience as a participant been useful? If you are a researcher, have you got any advice on resisting the temptation to rely on students? Send your letters for publication to psychologist@bps.org.uk, or by post to the Leicester address.

References

- Bonetti, S. (1998). Experimental economics and deception. *Journal of Economic Psychology*, 19, 411–414.
- Christensen, L. (1988). Deception in psychological research: When is its use justified? *Personality and Social Psychology Bulletin*, 14, 664–675.
- Gross, A.E. & Fleming, I. (1982). Twenty years of deception in social psychology. *Personality and Social Psychology Bulletin*, 8, 402–408.
- Keith-Spiegel, P. & Koocher, G.P. (1988). *Ethics in psychology: Professional standards and cases*. New York: Random House.
- Kimmel, A.J. (1996). *Ethical issues in behavioral research*. Cambridge, MA: Blackwell.
- Kimmel, A.J. (1998). In defence of deception. *American Psychologist*, 53, 803–804.
- Korn, J.H. (1988). Students' roles, rights and responsibilities as research participants. *Teaching of Psychology*, 15, 74–78.
- Masling, J. (1966). Role behaviour of the subject and psychologist and its effects upon psychological data. *Nebraska Symposium on Motivation*, 14, 67–103.
- McNemar, Q. (1946). Opinion-attitude methodology. *Psychological Bulletin*, 43, 289–374.
- Rubenstein, C. (1982). Psychology's fruit flies. *Psychology Today*, 16, 83–84.
- Schuler, H. (1982). *Ethical problems in psychological research*. New York: Academic Press.
- Sharpe, D., Adair, J.G. & Roese, N.J. (1992). Twenty years of deception research: A decline in subjects' trust? *Personality and Social Psychology Bulletin*, 18, 585–590.
- Sieber, J.E. & Saks, M.J. (1989). A census of subject pool characteristics. *American Psychologist*, 44, 1053–1061.
- Smith, S.S. & Richardson, D. (1983). Amelioration of deception and harm in psychological research: The impact of debriefing. *Journal of Personality and Social Psychology*, 44, 1075–1082.