

Compensation of Human Research Participants

The Research Ethics Office recognizes the value of clarifying and disseminating for researchers and REB members, the principles, practices and processes related to different issues in human research ethics. These guidelines reflect current thinking at the University of Alberta about compensation of human research participants.

Compensation refers to providing subjects with money or a prize, or a chance for money or a prize, as an incentive and/or reward for participating in a research activity. This is distinct from reimbursing participants for minor incidental expenses they incur by participating in the research, for instance, transportation costs or parking, which is not problematic from an ethics perspective.

Research Ethics Boards are instructed to weigh the benefits and risks of a procedure, which means that marginal ethical considerations can be outweighed by larger benefits. Further clarification can be obtained by consulting with a Research Ethics Board member.

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1. Compensation is often not necessary

It should not be assumed that people must be compensated in order to participate in research studies. In fact, many studies proceed without any compensation to participants. However, compensation can improve participation rates, making the sample of respondents more representative of the population under study. In some cases, participants may feel that some compensation is appropriate, given their contribution of valuable information and time.

NOTA BENE: The recommendations contained in this document are not intended to be applicable to patient related biomedical research. If you are considering compensation for patients participating in a biomedical study, consult with staff or Chair of the Health Research Ethics Board.

2. Compensation should be appropriate in type and in amount

The TCPS notes that The element of voluntariness has important implications. Consent must be freely given and may be withdrawn at any time. Undue influence may take the form of **inducement**, deprivation, or the exercise of control, or authority over prospective subjects.

The TCPS goes on to state: ...a prospective subject's choice to participate is voluntary. Pre-existing entitlements to care, education and other services shall not be prejudiced by the decision on whether to participate. Accordingly, a physician should ensure that continued clinical care is not linked to research participation, and teachers should not recruit prospective subjects from their classes, or students under their supervision, without REB approval.

In addition, care must taken "...to prevent the development of a payment structure for research participation that might place undue pressure on research subjects either to join or remain within a research project. In research projects where subjects will be compensated, REBs should be sensitive to the possibility of undue inducement for participation, such as payments that would lead subjects to undertake actions that they would not ordinarily accept. REBs should pay attention to issues such as the economic circumstances of those in the pool of prospective subjects, and to the magnitude and probability of harms.

If participants are to be compensated, the details of the compensation must be provided to the REB. The compensation must be commensurate with the risks of participation and must not be so significant that it could be perceived to be an inducement to participate. Details must be provided concerning what impact withdrawal from the study will have on compensation. It is considered coercive and thus unacceptable to have payment depend on completion of the project. However, in many cases it may be acceptable to pro-rate the amount of compensation given to subjects who withdraw before completion or to divide the research into stages, with an honorarium attached to each stage.

3. Non-identical compensation of participants

Considerations of fairness favour compensating all participants equally. Sometimes a researcher has reasons to compensate respondents by unequal amounts. Unequal compensation can arise in at least the following ways: by design, by tying compensation to performance, and by chance.

3.1. Unequal compensation by design

It is unethical to compensate different participants by different amounts if they contribute in like manner to the research unless the differences in compensation are due to chance, to differences However, a research design might require more extensive contribution of time and effort from some participants than others. An example in which differences in compensation might be appropriate is if a survey is conducted in two forms – a short printed survey sent to many prospective participants, and a long form (or one requiring personal interviews) for a smaller number of participants.

Custom may also suggest that compensation differ. For example, a study may involve parents and their small children, who may be compensated differently. However, parents should not be compensated for enrolling their children in studies and children should not be told they will be compensated as part of the recruitment process. As another example, some First Nations expect compensation for Elders that differs in kind or extent from compensation for other participants.

3.2. Unequal compensation due to differences in performance

A researcher may have valid reasons to want to tie compensation to some aspect of performance. It may be necessary to motivate active or even energetic participation, for example.

Informed consent requires indication of the range of compensation likely to arise. The researcher should also carefully consider the extent to which compensation must depend on performance. Participants who leave empty-handed may feel embarrassed and unfairly used.

Compensation tied to performance is complicated from an ethical point of view if it is combined with compensation varying by design or compensation tied to chance. For example, it is problematic if an experiment assigns subjects to different experimental conditions that are expected to result in different levels of compensation, even if the assignment of subjects to experimental condition is done randomly.

3.3. Unequal compensation due to chance

Compensation may be tied to chance in many different ways. It may be tied to performance with different subjects performing slightly different tasks (perhaps due to deliberate randomization of task details). For example, the experimental task might be to decide, as quickly as possible, whether a string of letters constitutes a word in English. The strings of letters may be generated randomly, separately for each subject, in which case some subjects may, through bad luck, get more difficult strings to evaluate than other subjects. However, if each subject sees numerous such strings, the differences in compensation due to chance will be slight. The chance element should be pointed out to prospective participants as part of informed consent.

More problematic is if subjects are assigned randomly into different groups, with some groups being compensated at a lower rate than others by design. To pursue the example above, there might be two experimental groups, with one group seeing long strings of characters, expected to be easier to recognize as a word or not, from shorter ones. Then, although every subject has an equal expected compensation before the study begins, they do not once they are assigned to an experimental group, and sizable differences in compensation among subjects arise which are not under their control. While such arrangements are not prohibited, they must be shown to be necessary, and subjects should be told of the differences in advance (as part of informed consent). Subjects should also be debriefed afterwards if there is any prospect of their learning of their compensation relative to others taking the study. In this way subjects who are poorly

4. Lotteries

Some researchers wish to compensate participants using a draw or lottery, defined as a chance to win a substantial prize, instead of or in addition to giving every participant a smaller prize.

4.1. Reasons given to use lotteries

Researchers wishing to use lotteries as compensation have cited the following reasons.

- Many potential participants would prefer a chance to win a sizeable prize rather than a small reward, such as a 1 in 100 chance at winning \$100 rather than being paid \$1 for sure. This preference is reflected in higher response rates, which makes the sample of respondents more representative of the population under study and thus improves the validity of the research.
- It can be expensive to compensate every participant. For example, mailing \$1 to every survey respondent costs more than 50 cents, raising the cost of compensation by more than 50 percent. It is much cheaper to mail a cheque to only one percent of all respondents.
- With surveys or experiments administered on-line, paying every respondent enough to induce an adequate response rate may encourage professional respondents, who seek to complete the study as quickly as possible, with no concern for the accuracy of their answers, in order to maximize their rate of compensation. They may defraud the researcher by completing the study multiple times using different on-line identities, receiving compensation each time. Lotteries may be less likely to encourage such behaviours.
- Compensating every respondent turns every respondent into a paid participant. This can affect the respondents' attitudes in ways that are hard to detect or control for, threatening the validity of the study. When participants are told, on the other hand, that they have a 1 in 100 chance of being compensated, they realize that they are very likely donating their time to the research, and the role of paid respondent is avoided.
- A lottery may be necessary to study consequential choices. For example, studies of consumer behaviour often ask participants to make a series of choices among products that are described to them. If these products are inexpensive, then it is an easy matter to make such choices consequential without making use of a lottery. Subjects might be told that one of their choices will be chosen at random and they will be rewarded with a beverage (for example) that corresponds to their choice. Knowing this, subjects are motivated to make choices that are in line with their true preferences. No lottery is involved because every subject receives the same reward – a beverage of their choice. However, this practice can only be used to study choice for inexpensive products or services.

Lotteries are a natural means for making nontrivial choices consequential. In order to study choice among food blenders, for example, it is impossible to reward every participant with a food blender of their choice. However, choices can still be made consequential by telling them that 1 in 20 respondents will be selected at random, and each will receive the food blender they chose for a randomly selected choice. This is a lottery, because participants are not rewarded equally due to chance.

A researcher may wish to study consumer behaviour in lottery or lottery situations.

4.2 *Legal issues pertaining to lotteries*

A lottery involving research subjects at a university does not constitute a gaming activity, as defined by section 207 of the federal *Criminal Code*. Alberta's *Gaming and Liquor Act* only requires licenses for gaming activities as defined by the *Code*. Thus no license is required.

However, the lottery must not require subjects to pay money or other valuable consideration in order to participate. In addition, winning the lottery must be based on skill as well as chance.

Thus, many lotteries require the participants to answer a skill-testing question in order to qualify for a chance to win the prize.

Under federal law, it is necessary that you answer a skill-testing question successfully in order to qualify for a chance to win the prize. If you wish to be considered for this prize, then please answer the following question. (Write your answer in the blank space provided.)

$$(13 + 17) / 10 = \underline{\quad}.$$

This is only an example. It is not necessary (nor perhaps even desirable) to explain that the question is a legal requirement. Note that the question need not be very difficult by university standards.

It would also be permissible, in a study that assesses subject performance in some manner (see Section 3.2, above), to require a minimal level of performance in the study to qualify for the lottery.

Decision-making under risk, including gambling behaviour, is a legitimate subject of study. However, such studies must comply with section 201 of the *Criminal Code*. Researchers requiring further information should contact the Research Ethics Office.

4.3 *Ethical issues*

A primary ethical concern is that lotteries exploit decision making weaknesses of prospective participants. In particular, potential respondents tend to focus on the size of the potential reward and give too little consideration to the small probability of winning the prize, thus constituting inducement or coercion. In addition, gambling is viewed as immoral by some prospective research participants.

4.4 *Minimum requirements for lottery incentives*

If lottery compensation is appropriate to the study, it should meet the following minimum requirements.

- The value of the prize should be given when recruiting participants and as part of informed consent. Under no circumstances should it be larger than \$500.
- The probability of winning the prize should be given when recruiting participants and as part of informed consent. This probability should be a round number, such as 1 in 100 and not .027. It should be easy for prospects to calculate in their heads the expected value of participating in the study.
- To satisfy federal legal requirements, receipt of the prize must depend to some extent on skill.
- If gaming behaviour is the subject of study, then participants must be told this as part of recruitment and informed consent. If the lottery is used solely as a means of compensation, then participants must be allowed to opt out of the lottery. However, even if participants withdraw from a study, they should remain in the lottery, if that is the compensation offered in that study.
- The number of prizes awarded must be equal to the probability of winning times the number of participants, with non-integer amounts rounded up to the next highest integer. That is, if the probability of winning a prize is given as 1 in 100, and there are between 401 and 500 participants, then exactly 5 prizes must be awarded. Note that this calculation is based on the total number of participants, not on the number of participants that satisfy any skill-testing requirements.
- When practical, provide minimum compensation to every participant in addition to a lottery. This reduces the size of inequalities in compensation between participants due to chance.

Sometimes subjects are obtained using a service, or through another university, that uses lotteries that do not fulfill all of these requirements. Such cases are best decided on an individual basis. The research ethics application must indicate how the lottery's implementation departs from the minimum requirement given above.