The Extended Welfare Assessment Grid: A Matrix for the Assessment of Welfare and Cumulative Suffering in Experimental Animals

Paul Honess and Sarah Wolfensohn

Department of Veterinary Services, University of Oxford, UK and School of Veterinary Medicine and Science, The University of Nottingham, UK

Summary — Combining a range of assessment parameters into one usable entity has been identified as an important goal in providing a practical, objective and robust assessment of welfare, particularly in laboratory animals. This paper refines and extends one such previously published method. The proposed Extended Welfare Assessment Grid provides for the incorporation of changes in the state of an animal over time, allowing for predictive, retrospective, scheduled, or event monitoring. It enables the numeric, as well as visual, representation of the animal’s welfare, placing this in the context of the careful and realistic justification for experimental use of the animal. This assessment method represents a valuable tool for those tasked with ensuring ethical oversight, as well as for those planning the use, or monitoring, of animals in research. It is particularly applicable to animals used in long-term studies, especially non-human primates. It is believed that this system will draw attention to the temporal component of suffering that is often overlooked in the planning of research schedules and allow an assessment of cumulative suffering imposed by the events that occur.

Key words: animal welfare, cumulative suffering, experimental animals, objective assessment, visual representation.

Address for correspondence: Paul Honess, Department of Veterinary Services, University of Oxford, Parks Road, Oxford OX1 3PT, UK.
E-mail: paul.honess@vet.ox.ac.uk

Introduction

The use of animals in research remains controversial. The ethical framework within which much of this research is conducted requires not only the demonstration that the benefits accrued to society as a result of the research exceed the costs (harms) borne by the animals, but also requires the application of the principles of the Three Rs (Reduction, Refinement and Replacement; 1). Within this framework, it is necessary to monitor animal welfare as part of the process of estimating the costs to the animals of the programme of research, and to be able to demonstrate the ways in which these costs can be reduced by the application of the Three Rs. The use of primates in animal experiments is arguably more controversial than that of any other animals, and recently the European Parliament called for an end to their use in this way (2). This view is countered by those who insist that the potential benefits of the outcomes of such research can justify the use of primates, despite their capacity for suffering both physically and psychologically during their experimental lives (3). Whatever one’s view, the fact remains that primates are used in experiments, and that this is accepted and legal in most countries in the world. It is therefore necessary to ensure that the welfare of such animals is maximised, so that they suffer as little as possible during any experimental use, while the scientific objective is still reached. This leads on to a requirement to be able to assess their welfare. This is reflected in various pieces of legislation and associated codes of practice (e.g. 4, 5), since the justification for the use of animals in biomedical research is by demonstrating that the harms are outweighed by the benefits derived from the work.

Good animal welfare may be defined, according to the Five Freedoms (6), as being:

— Freedom from hunger and thirst;
— Freedom from discomfort;
— Freedom from pain, injury and disease;
— Freedom to express normal behaviours;
— Freedom from fear and distress.

Research which uses primates has the ability to impact on these five freedoms in some of the following ways, depending on the types of procedure being used:

— The use of food/fluid regulation paradigms.
— Keeping animals in metal cages on grid floors with little or no perching.
— Carrying out surgery or placement of implants, with subsequent chronic infections.