

Pre-registration of Studies and Analysis Plans

It has long been recognised that clinical trial protocols should be pre-registered in an open source repository to: 1) minimise the 'file drawer' effect, and 2) allow those reading reports of these trials to assess whether and why changes have been made to the study protocol and whether these are justified. In both cases the aim is to reduce a bias towards publishing positive or 'interesting' findings.

It is now recognised that this does not go far enough and that it is essential for all research reports to be fully transparent about whether a finding being reported arises from an iterative process of exploring the data or a predetermined plan for answering a predefined research question. Without such transparency it is impossible for those reading research reports to know how much trust to put in the findings. Therefore *Addiction* requires a clear statement in the Methods sections of all research reports and systematic reviews about which if any of the findings reported arose from pre-registered analysis plans. Note that we do not require pre-registration, only that authors make it clear whether or not an analysis was pre-registered.

Pre-registration of analysis plans involves publishing in an open source repository the precise research question and the specification for the analysis for answering it prior to examining the data. It does not have to be prior to conducting the study; pre-registration of studies is a different requirement and does not necessarily involve specification of the analysis plan.

The most convenient place for publishing pre-registered analysis plans is the Open Science Framework website (osf.io). All researchers are recommended to use this free resource to keep important documents relating to their research projects and easily make publicly accessible any that one wishes through a web link or doi number. An example of a pre-registered protocol for a survey analysis is given here <https://osf.io/arxm3/> (sign-in required).

For more information see <https://cos.io/prereg/>.