

# Use of expert knowledge elicitation techniques at the EMCDDA for monitoring purposes: the PEOPLE project

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## Introduction

Expert knowledge is often used to complement established data collections at the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), collecting it through the REITOX network of National Focal Points (NFP) in structured questionnaires, workbooks and other formats.

Expert knowledge elicitation include different recognised methodologies (Table 1) applied to obtain a structured assessment of expert knowledge, and the IDEA (Figure 1) was designed to combine most valuable steps from existing structured protocols, and combine them into a single and practical protocol.

PEOPLE is a research project that focuses on adapting the IDEA Protocol to the specific needs of the REITOX Network and the EMCDDA, including practical examples and tools to apply structured expert knowledge elicitations (EKE) in the context of substance abuse.

Method	Sheffield	EFSA Delphi	Cooke
Aggregation	Behavioural Individual judgements followed by consensus judgements	Mixed Limited behavioural followed by equally weighted pool	Weighted pool Weights derived from performance in judging seed (calibration) variables
Managing experts	Workshop Experts meet together (distance possible but not ideal) and interact fully	Remote Conducted at distance with limited interaction	Mixed Maybe a single location but usually no interaction
Default Quantiles elicited (but could be different)	5 Credible bounds, median and quartiles (1,25,50,75,99)	3 or 5	3 5 <sup>th</sup> percentile, median and 95 <sup>th</sup> percentile (5,50,95)
Distribution fitted (but could be different)	Smooth curve (parametric distribution) With feedback	Histogram or Smooth curve	Histogram
Number of questions	Number of parameters	Number of parameters	Number of parameters + number of seed questions

TABLE 1: Characteristics of three expert knowledge elicitation methods

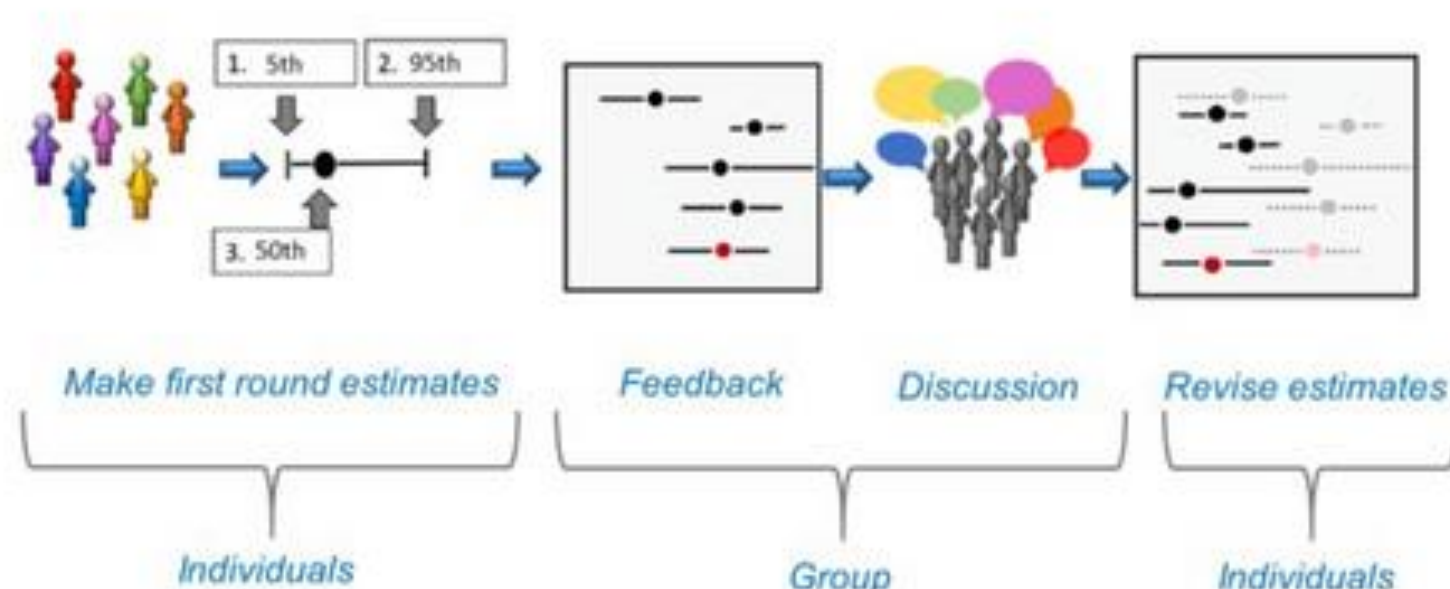
## Objectives

To adapt the IDEA protocol to the specific needs of the EMCDDA and REITOX Network.

To pilot the adapted EKE protocol using data collected for the monitoring of prevention interventions.

## Varying these methods – the IDEA method

Investigate, Discuss, Estimate, Aggregate



Adapted from: Hemming V, Walsh T, Hanea AM, Fuller E, Burgeman MA. 2018. Eliciting improved quantitative judgements using the IDEA protocol: A case study in natural resource management. PLoS ONE.

Figure 1: Structure of the IDEA Protocol

## Methods

To adapt IDEA protocol to the specific needs of EMCDDA and REITOX Network first an update of the latest methodological literature on expert elicitation approaches was performed. In a second phase a workgroup was established with representative experts from the field of prevention proposed by the NFP of France, Greece and Poland among others. In this elicitation exercise, participants analysed the standardised data collection

form on prevention (Standard Questionnaire 25) used by NFPs, and a framework for the pilot exercise was defined based on this example. Consensus on questions to include in the pilot study was reached through an iterative process of consultation. NFPs volunteering for the participation in the EKE pilot exercise and the extensive professional network of prevention experts of the EMCDDA was used to select an convenient sample of experts from Europe, and in November and December of 2023 consecutive rounds of expert consultation will be organised, following a predefined protocol.

In a post-elicitation phase feed-back to experts will be provided and a post hoc of analysis will be used as a basis to propose an adapted protocol for the EMCDDA and REITOX Network.

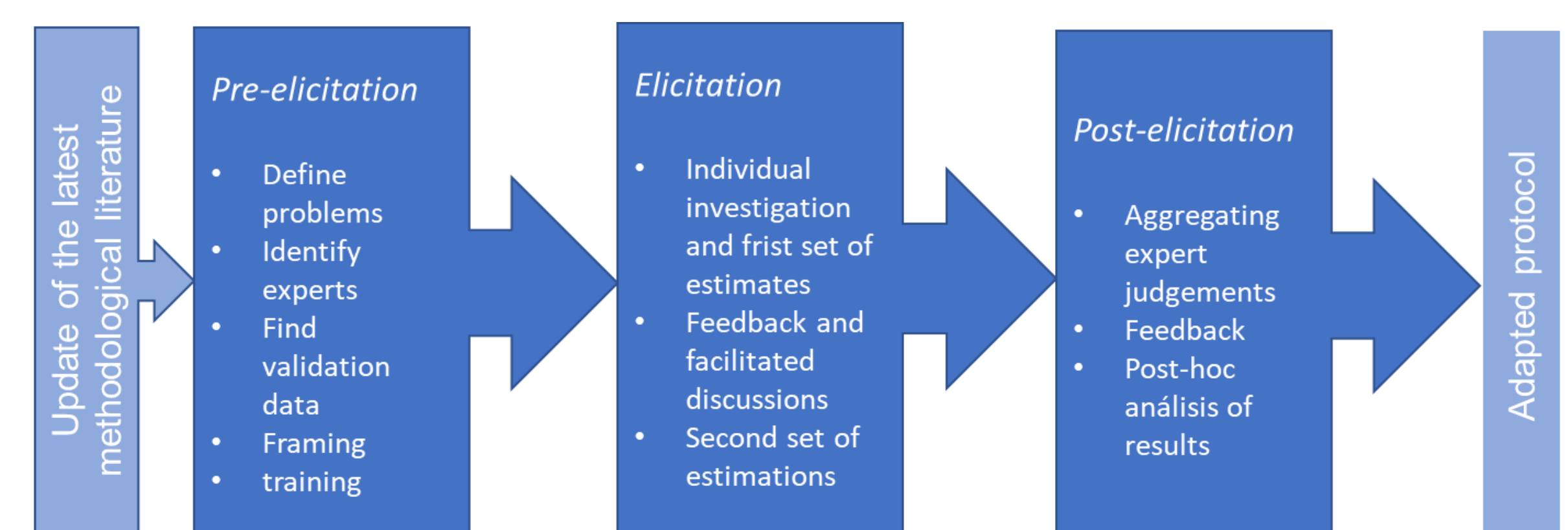


Figure 2: Steps of the PEOPLE project

## Outcomes and future perspectives

Despite the popularity of EKE protocols in health-related applications, no references using EKE in the context of substance abuse were found by our literature review. Based on this review a more reliable technique for the EMCDDA was proposed and is currently being tested. Although different EMCDDA activities may need different approaches, we expect the theory, the methods and the validation process to contribute to the proposed EKE process in a way that ensures more reliable, transparent and reproducible results.

This structured protocol will mitigate most relevant biases (Table 2) and provide a reliable and reproducible expert judgment protocols to complement currently available monitoring data.

Structured Protocol Steps	Targeted Bias
Step 1 Recruit a diverse group of individuals	Helps to overcome individual biases like overconfidence and availability, and group biases (group-think, halo effects, dominance).
Step 2 Elicit individual private estimates	Helps to overcome group biases, promote decentralisation.
Use question formats that ask for upper and lower bounds / uncertainty	Helps with overconfidence by provoking counterfactual thinking.
Use question formats that avoid potential anchors	Helps to overcome anchoring.
Collect rationales and evidence	Helps to further promote counterfactual thinking, and overcome the availability bias, and overconfidence.
Provide anonymised feedback to experts of the full range of estimates	Helps to avoid group think, availability, and confirmation bias. It can also reveal potential ambiguity in the questions prompting revision and re-estimation.
Step 3 Facilitate discussion where experts are required to consider the merits of each of the judgements provided (rather than defend their own)	Helps to avoid group think, availability, and confirmation bias.
Elicit individual private second round estimates	Uses the anchoring bias such that experts anchor on their initial estimates and only change their opinion in light of strong arguments. Avoids group think and dominance.

Table 2: The steps of the proposed structured protocol and the biases they mitigate against