

ST2-RES-EPA4 – Research Skills – Data analysis and synthesis 2

Area of practice	Research	EPA identification	ST2-RES-EPA4	
Stage of training	Stage 2 – Proficient	Version	v0.6 (EC-approved 25/05/18)	
The following EPA will be entrusted when your supervisor is confident that you can be trusted to perform the activity described at the required standard without more than distant (reactive) supervision. Your supervisor feels confident that you know when to ask for additional help and that you can be trusted to appropriately seek assistance in a timely manner.				
Title	Skills in data analysis and synthesis 2.			
Description Maximum 150 words	The trainee will demonstrate skills in analysis of data for a research project being undertaken during the research rotation. The trainee will demonstrate competence in analysing the results of the project, e.g. use of appropriate statistical techniques, reporting significance and effect size, drawing conclusions and identifying limitations (as relevant to the study).			
Fellowship competencies	ME	7	HA	1
	COM	1	SCH	1,2,3
	COL	3,4	PROF	1,2,3
	MAN	1,3		
Knowledge, skills and attitude required The following lists are neither exhaustive nor prescriptive.	<p>Competence is demonstrated if the trainee has shown sufficient aspects of the knowledge, skills and attitude described below.</p> <p>Ability to apply an adequate knowledge base</p> <ul style="list-style-type: none"> • knowledge of statistical methods used in psychiatric research (quantitative studies) • If a qualitative study, advanced knowledge of key concepts in analysis of qualitative data, e.g. data saturation. • Knowledge of key concepts involved in analysis, such as bias, corrections, significance, effect size etc. • Knowledge of techniques used to best present results in various forms and various settings <p>Skills</p> <ul style="list-style-type: none"> • Application of statistical methods to analyse data collected in a study, reporting statistical significance and effect size (for quantitative research) • Presentation of results in graphical, tabular and text form in clear and standard formats 			

	<ul style="list-style-type: none"> • If the study is qualitative, skilled use of techniques such as thematic analysis etc. • Drawing justifiable conclusions from the analysis of results • Placing conclusions in the context of current knowledge, and identifying the implications of the findings in furthering that knowledge/evidence base • Identifying limitations of the conclusions from the study • Identifying areas for further research • Developing a plan for dissemination/publication of results <p>Attitude</p> <ul style="list-style-type: none"> • Efficient utilisation of resources and time when analysing data from a research study • Collaborative involvement of supervisor and colleagues in the research/academic team • Maintaining an attitude of academic rigour and objectivity when analysing data and reporting results • Demonstrate an appropriate ethical attitude to the research process <p>Trainees may develop and demonstrate additional skills using relevant statistical analysis tools in Excel, SPSS or other available programs</p>
Assessment method	<ul style="list-style-type: none"> • Progressively assessed during individual and academic supervision, including three appropriate WBAs. • at least one professional presentation to an academic meeting reporting the results of the study and the conclusions from, and implications and limitations of, these results
Suggested assessment method details	<ul style="list-style-type: none"> • DOPS' and other professional presentations that assess progress at different stages of the data analysis process • Supervision may include "Research-Based Discussions" that may involve the trainee presenting to their supervisor several aspects of their analysis, e.g. primary outcomes and secondary outcomes, conclusions etc. The supervisor may read and critique draft presentations of results and conclusions in text, graph and table forms. These can be adapted to be conducted as DOPS
<p>References</p> <p>Freeman C and Tyrer P, (eds) (2006), <i>Research Methods in Psychiatry: A Beginner's Guide</i>. Third Edition. Royal College of Psychiatrists London:</p> <p>Ben Tovim, D (1994) Handy hints on completing a psychiatric research project: 6. On Holidays, Data Sheets, Computers and Consultants. <i>Australasian Psychiatry</i> 2(6):277-278</p>	

Ben-Tovin, D (1995) Handy Hints on completing a psychiatric research project: 7 On analysis and finding the analytic line. *Australasian Psychiatry* 3(2):96-97

Neyeloff, J. L., Fuchs, S. C., & Moreira, L. B. (2012). Meta-analyses and Forest plots using a Microsoft excel spreadsheet: Step-by-step guide focusing on descriptive data analysis. *BMC Research Notes*, 5(1), 52. doi:10.1186/1756-0500-5-52

COL, Collaborator; COM, Communicator; HA, Health Advocate; MAN, Manager; ME, Medical Expert; PROF, Professional; SCH, Scholar