User Guide for Data Templates

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Introduction

The Area Based Childhood (ABC) Programme Evaluation

The Centre for Effective Services (CES) was tasked by the Department of Children and Youth Affairs (DCYA) and the Atlantic Philanthropies to conduct an evaluation of the ABC Programme. One of the key strands of this evaluation was examining pre- and post-intervention outcomes data about service users.

This data was gathered by practitioners in the areas, using templates developed by the CES evaluation team. One aim of this was growing local capacity around data collection and use, with the ultimate goal of improving service planning and delivery.

The CES evaluation team has developed these new templates, based on the ones used previously in the ABC national evaluation, to share for wider use across children and young people's services.

# Purpose of the data templates

Easier data entry
- Faster data entry
- Immediate warnings around invalid data
- Automatically match cases between pre- and post-intervention

Scores calculated automatically
- Scores on each scale are calculated as the data are entered, allowing for immediate feedback

Clean data presented in useful formats
- Single sheet of all data, ready for detailed analysis
- Summary sheet with all of the calculated scores
- Charts illustrating changes in average scores
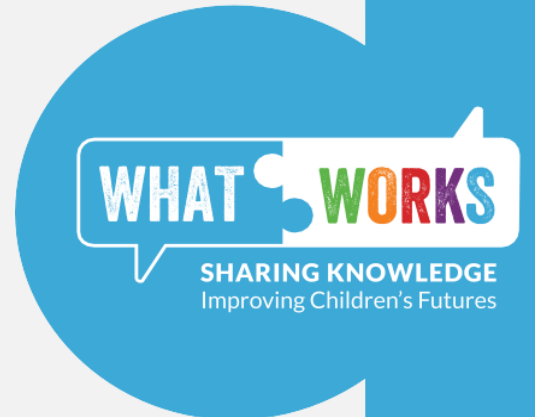
Note on versions of the template

Templates for the following questionnaires have been developed:

Strengths and Difficulties Questionnaire for 2 to 4 year olds (SDQ 2-4 years)
Strengths and Difficulties Questionnaire for 4 to 17 year olds (SDQ 4-17 years)
Strengths and Difficulties Questionnaire for 11 to 17 year olds (SDQ 11-17 years)
Pianta Child-Parent Relationship Scale (CPRS)
Santa Barbara School Readiness Scale (SBSRS)
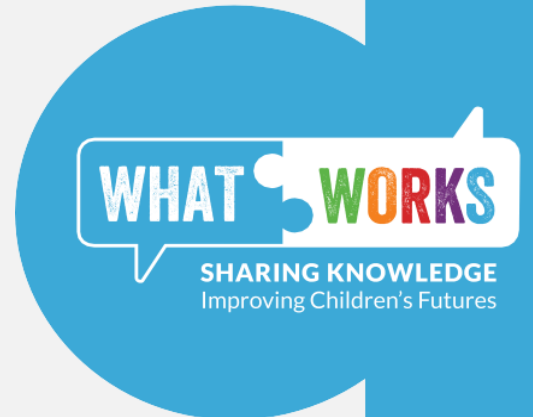**Parental Stress Scale** (PSS)
Tool to measure Parenting Self-Efficacy – Discipline and Boundary Setting (TOPSE)
WHO-5 Well-Being Index (WHO-5)
Home Learning Environment Measure (HLEM)

The process for entering data is identical for each questionnaire.

Throughout this guide, the SDQ 4-17 years will be used as the example.

Quick guide to the templates

- **Eight sheets and the relevant sections in this guide**

Introduction	Data entry	Data tables	Charts	Modify
Describes and sets out the purpose of the template	Enter data at pre- and post-intervention	Matched pre and post data, with scores calculated	Showing changes in average scores, for all or matched only	The user may choose to alter some aspects of the template
Introduction	PRE	Data	Chart_All	Modify
	POST	Summary	Chart_Matched	

A: slides 8-18 **B:** slides 19-25 **C:** slides 26-29

Common errors when entering the data

Cells will turn red if the template detects an error. This is typically for one of the following reasons:

- Invalid data – some cells only allow certain values (e.g. 'Male' or 'Female' for gender); clicking the triangle to the right of the cell will give you the list of valid entries for the cell

- Duplicate IDs – please ensure that all IDs are unique

Outline of this user guide

A. Process for Data Entry

B. Outputs of the Template

C. Modifying the Template

A. Process for Data Entry – General tips for IDs

- **Importance of unique IDs**

- Each service user will typically be measured once before an intervention and again after the interventions. For services offered within the ABC Programme, usually this would either be a child or a parent.

- Before data collection begins, it's a good idea to make sure you have a system in place for assigning a unique ID to each service user. This is important for reliably matching the scores pre- and post-intervention. Otherwise you will not be able to see the progress of the parent or child.

- **The key things to remember:**

- Each service user must have a unique ID – e.g. no two children can share the same ID
  - ➢ This is particularly an issue if you are collecting data over multiple years. It can be tempting to reuse an ID, but there is a danger of this causing confusion if the data were pooled.

- The same ID must be used at pre and post for each service user – e.g. a child recorded as 'A001' at pre must be recorded as 'A001' at post.

A. Process for Data Entry – Blank template

- The first sheet in the template (PRE) is where the pre-intervention data are entered, and will initially look something like this. In each row you will fill in the information on a single service user.

Child ID	Intervention	School	Date PRE Questionnaire Completed	PRE Questionnaire completed by	Child Gender	Child Date of Birth	1. Considerate of other people's feeling	2. Restless, overactive, cannot stay till for long	3. Often complains of headaches, stomach-aches or sickness	4. Shares readily with other children (treats, toys, pencils etc.)

Introduction **PRE** POST Data Summary Chart_All Chart_Matched Modify ⊕

A. Process for Data Entry – Entering the data

- At this point you can enter your data as you would for any Excel spreadsheet, with some small differences:

- Once you enter the ID in the first column of a row, the whole row changes colour to show that the template is ready to interpret data from that service user.

- Empty cells turn grey, to show you where there is missing data.

- Where valid data has been entered, the cells will turn yellow.

Child ID	Intervention	School	Date PRE Questionnaire Completed	PRE Questionnaire completed by	Child Gender	Child Date of Birth	1. Considerate of other people's feeling	2. Restless, overactive, cannot stay till for long	3. Often complains of headaches, stomach-aches or sickness	4. Shares readily with other children (treats, toys, pencils etc.)
A001	IY Early Years		11/11/2017	Parent	Male	03/08/2014	Somewhat true	Not true		Not true
A002	IY Early Years		11/11/2017	Parent	Female		Somewhat true	Somewhat true	Not true	Not true
A003	IY Early Years		11/11/2017	Parent		15/12/2014	Certainly true	Certainly true	Not true	Somewhat true
A004	IY Early Years		11/11/2017	Parent	Male	22/11/2014	Not true	Not true	Not true	Not true

Introduction | **PRE** | POST | Data | Summary | Chart_All | Chart_Matched | Modify

A. Process for Data Entry – Easi...

A. Process for Data Entry – Easier data entry (i)

- For some columns, there is a list of valid entries and only these may be entered into the template. For example, the three possible responses to the 25 statements in an SDQ are:

  - Not true

  - Somewhat true

  - Certainly true

- In each of the templates, there is a list of valid responses to any question used to calculate scores for the questionnaires. This is done to ensure that the scores are calculated reliably.

- Other columns may also have a similar list. For example, only 'Male' or 'Female' may be entered into a column on gender. [**Note**: these lists may be modified by the user, please see slide 26 for details.]

- Where these lists are in place, there are two main ways that the template can help you enter the data more efficiently. These are shown in the following pages.

A. Process for Data Entry – Easier data entry (ii)

1. When you start typing in a cell, the template will attempt to autocomplete the entry with one of the valid options.

   In the example to the right, after typing the letter 's', the template will automatically complete the entry 'Somewhat true'.

   You can now tab into the next cell and repeat this process.

   Typically, only a single letter or number is needed for the autocomplete to work.

Child ID	1. Considerate of other people's feeling	2. Restless, overactive, cannot stay till for long	3. Often complains of headaches, stomach-aches or sickness	4. Shares readily with other children (treats, toys, pencils etc.)
A001	Somewhat true	Not true		Not true
A002	Somewhat true	Somewhat true	Not true	Not true
A003	Certainly true	Certainly true	Not true	Somewhat true
A004	Not true	Not true	Not true	Not true
A005	Somewhat true	Not true	somewhat true	

◄ ► | Introduction | **PRE** | POST | Data | Summary | Chart_All | Chart_Matched | Modify

2. Alternatively, when you select a cell and click on the arrow to the right, a list of valid entries will appear.

In the example to the right, the three valid responses to SDQ questions are shown.

You may then click on the relevant item in the list that you want to enter into the cell.

Similar to the way empty cells are coloured grey in the template, cells with invalid entries are coloured in red.

In the example to the right, 'Partially true' is not a valid entry for an SDQ questionnaire.

The bright colour allows for bad data to be easily identified and corrected by the user with the data entry methods described previously.

Unless the error is corrected, the template will treat this as an empty cell.

It can be very easy to make more subtle errors in data entry, such as adding an extra space at the end of an entry. This is not an issue for a human reader, but it can cause problems when attempting to analyse the data, since the computer may think this is a different entry. It is quite time consuming to find and clean up these issues, so the template was designed to flag them early.

Child ID	1. Considerate of other people's feeling	2. Restless, overactive, cannot stay till for long	3. Often complains of headaches, stomach-aches or sickness	4. Shares readily with other children (treats, toys, pencils etc.)
A001	Somewhat true	Not true		Not true
A002	Somewhat true	Somewhat true	Not true	Not true
A003	Certainly true	Certainly true	Not true	Somewhat true
A004	Not true	Not true	Not true	Not true
A005	Somewhat true	Not true	Partially true	

Introduction | PRE | POST | Data | Summary | Chart_All | Chart_Matched | Modify

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A. Process for Data Entry – Copying data

You can copy data from another spreadsheet into the data entry sheets on the template, however you will need to be careful when doing so. Sometimes you can copy the formatting, such as the cell colour, of the original cell.

This has no effect on how the scores are calculated, but it can make data entry more difficult it can override the highlighting of errors, discussed on the previous slide.

To prevent any issues with copying data, it is safest to paste the cell values only.

As shown in the screenshot here, you simply right-click on the cell where you want to paste the copied data and select to paste values only.
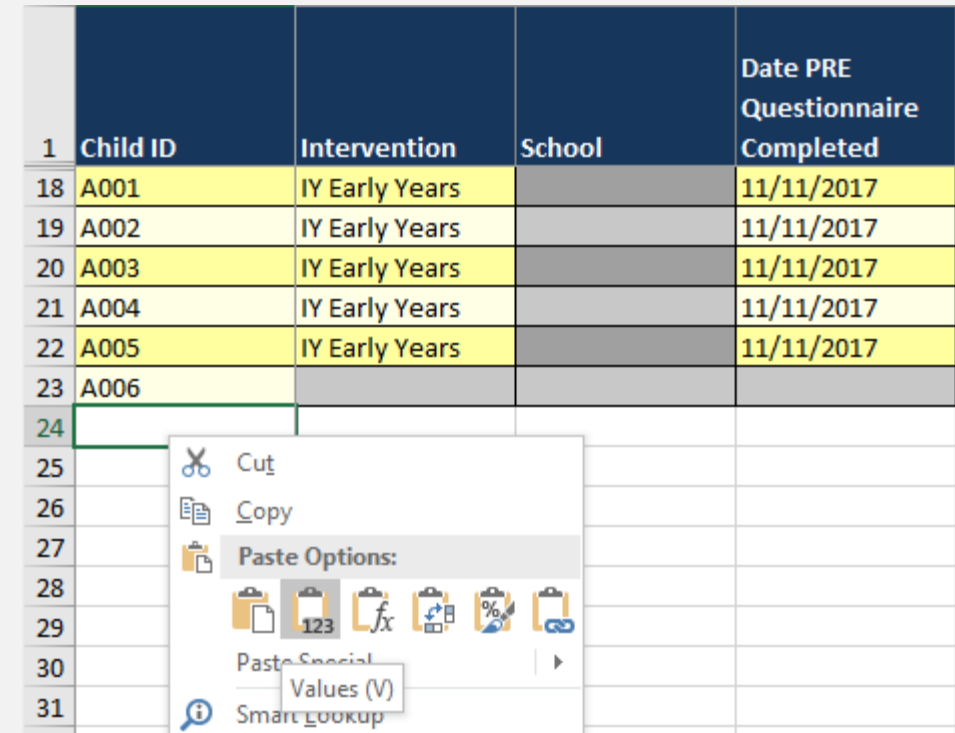
A. Process for Data Entry – Entering post data

- The process for entering post-intervention data is identical. You simply find the POST sheet and enter the data as you did with the PRE sheet. The only difference is that valid cells are now coloured in blue. This is just to make the sheets look different and help you avoid accidentally using the wrong sheet.

- This is discussed in detail in the following pages, but you will see from the example below that the service users don't have to be entered in the same order as they were in the PRE sheet.

Child ID	Intervention	Creche	Date POST Questionnaire Completed	POST Questionnaire completed by	Child Gender	Child Date of Birth	1. Considerate of other people's feeling	2. Restless, overactive, cannot stay till for long	3. Often complains of headaches, stomach-aches or sickness	4. Shares readily with other children (treats, toys, pencils etc.)
A003	IY Early Years			Parent	Female		Certainly true	Not true	Not true	Somewhat true
A001	IY Early Years			Parent	Male		Somewhat true	Somewhat true	Somewhat true	Certainly true
A004	IY Early Years			Parent	Male		Somewhat true	Certainly true	Not true	Not true

Introduction | PRE | **POST** | Data | Summary | Chart_All | Chart_Matched | Modify | ⊕

A. Process for Data Entry – Merging PRE and POST (i)

- As shown in the example on the previous slide, there is no need for the service users to be in the same order on each sheet. The template can match the pre- and post-intervention data automatically. This is done on the basis of the ID for the service users, which is always the first column on the data entry sheets.

- Wherever the same ID is used in the PRE and POST sheets, the template will match those service users for all of the sheets presenting the data. (Please see slide 7 for more information on IDs.)

- As with other types of data entry, if the template detects an error with an ID the cell will be coloured in red. The types of errors the template can detect, and how to resolve them, are discussed on the following slide.

1. <u>The same ID is used more than once</u>

   - If there are multiple copies of the same ID (see 'A003' below), then each is highlighted in red. This must be resolved for the data to be included in the analysis.

2. <u>An ID appears in the POST data, but not in the PRE.</u>

   Each ID that appears in the POST data, must have a corresponding ID in the PRE data for it to be included in the analysis (see 'A007' below).

   If you only have post-intervention data for this service user, enter their ID in an empty row on the PRE sheet and leave that row rest of the row blank. The post-intervention scores will now be calculated as normal.

Child ID	Intervention	School	Date PRE Questionnaire Completed
A001	IY Early Years		11/11/2017
A002	IY Early Years		11/11/2017
A003	IY Early Years		11/11/2017
A004	IY Early Years		11/11/2017
A005	IY Early Years		11/11/2017
A003			

Introduction | **PRE** | POST | Data | Summary | C

Child ID	Intervention	Creche	Date POST Questionnaire Completed
A003	IY Early Years		
A001	IY Early Years		
A004	IY Early Years		
A007			

Introduction | PRE | **POST** | Data | Summary | C

B. Outputs of the Template – Overview

- There are four outputs of the template:

1. Data sheet

   This sheet has all of the data entered (PRE and POST) with all of the measures calculated.

   Use: It presents a clean version of the data, ready for further analysis.

2. Summary sheet

   This sheet has only the scores for each service user, with arrows illustrating any observed changes.

   Use: It offers a simple description of each service user, which could be useful for casework.

3. Chart – All data

   This sheet has a chart illustrating the average scores, at PRE and POST, for all service users.

   Use: It shows overall changes in a way that is easy to communicate.

4. Chart – Matched data

   This sheet has a chart illustrating the average scores, at PRE and POST, for only service users that could be matched at pre- and post-intervention.

   Use: It shows overall changes in a way that is easy to communicate.

B. Outputs of the Template – Notes on score calculation

1. When calculating the scores on each scale, the template will check if **at least half** of the relevant questions have been answered. If fewer than half have been answered, then the template cannot calculate the score.

    *   For example, on the *pro-social* scale for the SDQ, the relevant questions are 1, 4, 9, 17 and 20. Once **three of these five** questions have been answered, the template will calculate the score for the pro-social scale. Otherwise the variable for this score will be left blank.

2. For some questionnaires there is an overall score, made up from adding together other sub-scales. Here, all of these sub-scales must have been calculated in order for the template to calculate the overall score.

    *   For example, the *total difficulties* scale for the SDQ is the sum of the *emotional*, *conduct*, *peer* and *hyperactivity* scales. **All four** of these must be calculated before the template will calculate the *total difficulties*.

*   This was done because it could be misleading to present scores when only a small number of questions have been answered.

B. Data Sheet

- The data sheet contains all of the information entered into the template, at both pre- and post-intervention.

- Information about the service users (such as the intervention and gender) are shown in green.

- Responses to questions at pre and post-intervention are recoded into their numerical value and shown in yellow and blue, respectively.

- Scores for each of the scales are shown in the last columns to the right.

Child_ID	Intervention	School	Date_PRE_Questionnaire_Completed	PRE_Questionnaire_completed_by	Child_Gender	Child_Date_of_Birth	PRE_SDQ_4_to_17_Q1	PRE_SDQ_4_to_17_Q2	PRE_SDQ_4_to_17_Q3	PRE_SDQ_4_to_17_Q4	PRE_SDQ_4_to_17_Q5	PRE_Q
A001	IY Early Years		11/11/2017	Parent	Male	03/08/2014	1	0		0	0	
A002	IY Early Years		11/11/2017	Parent	Female		1	1	0	0	0	
A003	IY Early Years		11/11/2017	Parent		15/12/2014	2	2	0	1	0	
A004	IY Early Years		11/11/2017	Parent	Male	22/11/2014	0	0	0	0	0	
A005	IY Early Years		11/11/2017	Parent	Female	29/03/2014	1	0	1			
A006												

| Introduction | PRE | POST | **Data** | Summary | Chart_All | Chart_Matched | Modify | ⊕ |

B. Summary Sheet (i)

- The summary sheet is focused only on the scores for each service user, with no other information. Here you can get a quick overview of how each service user is doing according to the measure(s), and see any progress being made.

Child_ID	PRE Emotional problems	PRE Conduct problems	PRE Hyperactivity	PRE Peer problems	PRE Total difficulties	PRE Pro-social	POST Emotional problems	POST Conduct problems	POST Hyperactivity	POST Peer problems	POST Total difficulties	POS Pro-
A001	0	1	5	6	12	6	2	5	2	3	12	
A002	1	4	3	2	10	4						
A003	4	5	4	4	17	3	2	2	3	4	11	
A004	0	2	2	4	8	3	2	2	4	2	10	
A005												
A006												

Introduction | PRE | POST | Data | **Summary** | Chart_All | Chart_Matched | Modify | ⊕

*Please note that the data shown in this example were entered randomly, and are not necessarily typical scores for an SDQ.

B. Summary Sheet (ii)

- If you scroll to the right on the summary sheet, you will also see that the changes in scores have been calculated. These changes have arrows to illustrate the nature of the change.

↓	Score went down
↕	No change in score
↑	Score went up

For some scales it is desirable for the scores to increase (e.g. in the *pro-social scale*, higher scores are better), while for others it is desirable for scores to decrease (e.g. in the *total difficulties scale*, lower scores are better).

This means that the arrows could be misleading when you try to interpret the data. For this reason, colour-coding was also added to allow you to quickly and intuitively understand the changes.

Child_ID	CHANGE Peer problems	CHANGE Total difficulties	CHANGE Pro-social
A001	-3 ↓	0 ↕	-1 ↓
A002			
A003	0 ↕	-6 ↓	2 ↑
A004	-2 ↓	2 ↑	0 ↕
A005			
A006			

Introduction | PRE | POST | Data | **Summary** | Cha

*Please note that the data shown in this example were entered randomly, and are not necessarily typical scores for an SDQ.

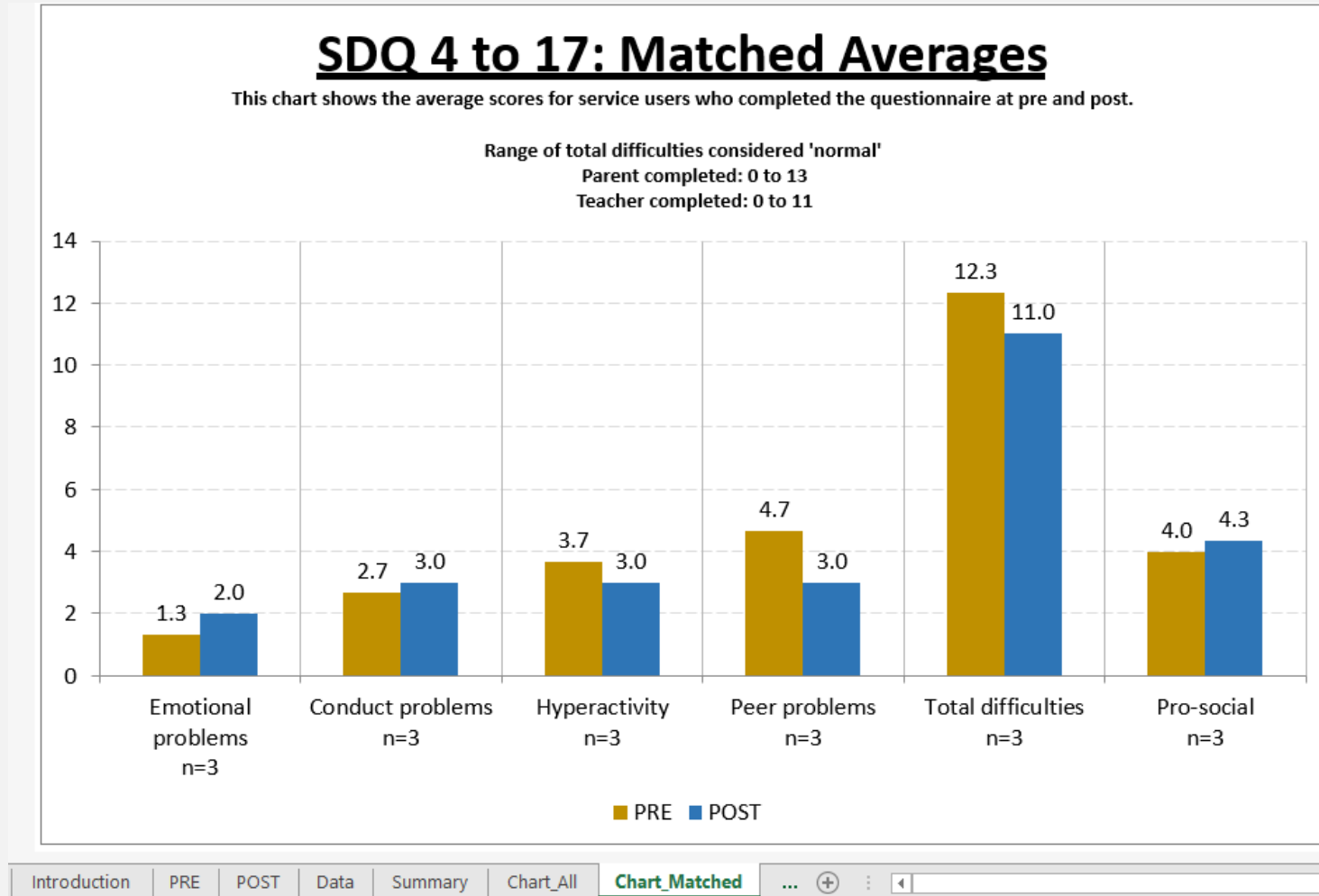| **Green**	Desirable change
Orange	No change
Red	Undesirable change

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B. Chart – All data

- The chart sheet contains a bar chart showing the average scores, for each scale, at both pre- and post-intervention.

- Each bar represents the average score for all service users where the scale could be calculated.

- Beneath the name of the scale, is the number of service users (n) whose data was used to calculate the average, at pre- and post-intervention.

- Where available, some contextual information about the scores is given below the title.
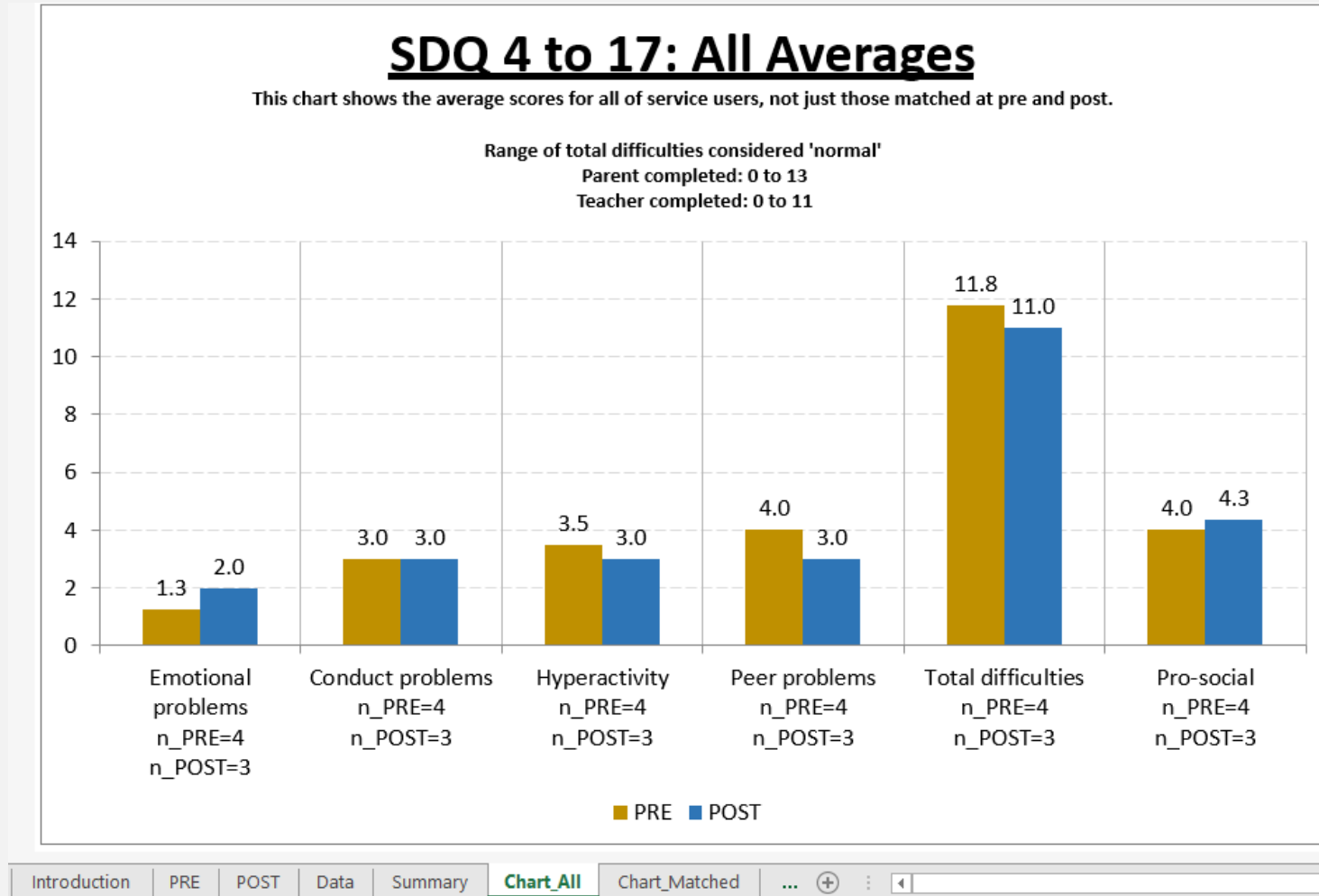
*Please note that the data shown in this example were entered randomly, and are not necessarily typical scores for an SDQ.

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B. Chart – Matched data

- This chart sheet is similar to the previous one, except that it only summarises the scores for service users where data was entered at pre- and post-intervention. Any service user who only completed the questionnaire once is not included here.

- This means that you can compare the same group of service users before and after they have received the intervention.

- The template cannot perform any statistical tests on the changes, and so any differences seem may or may not be statistically significant.

SDQ 4 to 17: Matched Averages
This chart shows the average scores for service users who completed the questionnaire at pre and post.

Range of total difficulties considered 'normal'
Parent completed: 0 to 13
Teacher completed: 0 to 11

	PRE	POST
Emotional problems n=3	1.3	2.0
Conduct problems n=3	2.7	3.0
Hyperactivity n=3	3.7	3.0
Peer problems n=3	4.7	3.0
Total difficulties n=3	12.3	11.0
Pro-social n=3	4.0	4.3

Introduction | PRE | POST | Data | Summary | Chart_All | **Chart_Matched** | ...

*Please note that the data shown in this example were entered randomly, and are not necessarily typical scores for an SDQ.

C. Modifying the Template - Overview

- The template has some core features which cannot be altered, primarily around the calculation of the scales. This is to ensure that the scores are calculated accurately and reliably.

- However, two main elements of the template may be changed by the user, depending on the information they wish to collect. This may be done through the 'Modify' sheet on the template, shown below. The details are discussed on the following pages.

C. Modifying the Template – Altering columns

- You may change the names of the first five column headings by editing the name in the Modify sheet. The others may not be changed as they are essential to the questionnaire.

- Say, your intervention was in local early years settings, and the 'School' column was not relevant for you. You could change it in the Modify sheet to 'Creche', as shown above.

- This will change the variable name for all other sheets. For example, the PRE sheet shown below copies the changes made in the Modify sheet.

- **Please note**: While the headings for the columns may be changed, unfortunately columns may not be deleted or inserted.

Child ID	Intervention	Creche	Date PRE Questionnaire Completed	PRE Questionnaire completed by	Child Gender	Chil Birth
FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	
					Female	
					Male	

Introduction | PRE | POST | Data | Summary | Chart_All | Chart_Matched | **Modify**

Child ID	Intervention	Creche	Date PRE Questionnaire Completed	PRE Questionnaire completed by	Child Gender	Chil Birth
A001	IY Early Years		11/11/2017	Parent	Male	03/0
A002	IY Early Years		11/11/2017	Parent	Female	
A003	IY Early Years		11/11/2017	Parent		15/1
A004	IY Early Years		11/11/2017	Parent	Male	22/1
A005	IY Early Years		11/11/2017	Parent	Female	29/0
A006						

Introduction | **PRE** | POST | Data | Summary | Chart_All | Chart_Matched | Modify

- You may also decide to define a list of valid entries for the column. This may be done to:

  a) Speed up data entry – using the methods described on slides 9 and 10

  b) Ensure that the data is entered consistently – allowing for subgroup analysis later

- To achieve this, simply

  - Ensure that the cell below the variable name is set to TRUE to enable the template to check the column for valid entries.

  - Enter a list of options in the cells below.

Now, in the PRE and POST sheets, these options will appear in the dropdown menu, and all entries that do not match one of the options will be highlighted in red.

Please note: If you have already entered data before making these changes, some of it may now be invalid. If so, check that the list on the validation sheet is complete, and if necessary, correct each red cell in the data entry sheets.

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- The template will also warn you about two kinds of errors when adding to the list of valid options. Both are illustrated on the screenshot here.

1. **Repeated option**

   In the 'Intervention' variable, *Triple P* is repeated

   Solution: Delete one of the duplicate entries.

2. **Gap in the list of options**

   In the 'Creche' variable, there are two empty spaces in the list. This can result in the options not appearing in the dropdown list accurately

   Solution: move the last option up, so that there are no gaps

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We hope you find the templates and this guide useful for planning and delivering services.