CREATING (AB) SINGLE-SUBJECT DESIGN GRAPHS IN MICROSOFT EXCEL 2003

Let's try to graph this data

<table>
<thead>
<tr>
<th>Date</th>
<th>Baseline Data</th>
<th>Date</th>
<th>NCR (intervention)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/10</td>
<td>2</td>
<td>11/15</td>
<td>3</td>
</tr>
<tr>
<td>11/11</td>
<td>3</td>
<td>11/16</td>
<td>3</td>
</tr>
<tr>
<td>11/12</td>
<td>3</td>
<td>11/17</td>
<td>2</td>
</tr>
<tr>
<td>11/13</td>
<td>1</td>
<td>11/18</td>
<td>1</td>
</tr>
<tr>
<td>11/14</td>
<td>2</td>
<td>11/19</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11/20</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11/21</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11/22</td>
<td>0</td>
</tr>
</tbody>
</table>
Step 1: Set up the Variables
AB Design

Use the top cells to Label the variables that will be displayed on X and Y axis of the graph

Step 1: Set up the Variables
X-Axis for AB design

Enter X-axis label in this cell
For example:
- If you are graphing data for each day enter, “Date” in this cell
- If you are graphing data for each trial, enter “Trial” in this cell
- If you are graphing data for each session, enter “sessions”
Step 1: Set up the Variables

X-Axis

Step 1: Set up the Variables

Y-Axis (AB design)

For AB design, Enter Y-axis label in 2 cells alternating between the Baseline (A phase) and the Intervention (B phase)

For example:
• To graph data for Baseline phase and NCR using AB design, Label the cell B1 “Baseline” and cell C1 “NCR”
Step 1: Set up the Variables
Y-Axis (AB design)

Step 2: Enter the data
X-Axis (AB design)
Enter the dates, or trial or session numbers in the column below the “X-axis label”
Step 2: Enter the Data
Y-Axis (AB design)

Underneath the “Baseline” phase (cell B2) enter the data that correspond to the dates (or session/trial #s). This slide shows imputing our baseline data for frequency of “call outs” (per hour) before the NCR (IV) was implemented.

Begin to enter the intervention phase data points from cell (C7)

In the “NCR” (intervention) phase (column C) enter the Intervention data that correspond to the dates (or session/trial #s) as it is shown in this slide. For example, to graph the NCR data for frequency of “call outs” (per hour), enter the first data point in cell C7.
AB Design Setup
You Excel Worksheet Should look Like This

Creating the Line Graph
We are Ready to Create the Graph
Step 3: Create the Line Graph
AB Design

- Position the mouse on cell B1
- Click and hold the left mouse button
- Move the mouse till all the data points are highlighted
- Release the left button
- If data collection for re-implementation of the intervention is ongoing, highlight additional empty cells. For example: if the data collection for implementation of NCR is going to continue for additional 7 days, cells 25 to 31 will be highlighted as well.

Click on Graph Icon
Step 3: Create the Line Graph
For All Designs

Click on Line graph Icon
Then Click “Next”

Click on Series
Step 3: Create the Line Graph For All Designs

Click inside of (X) Axis labels box

- Position the mouse on cell A2
- Click and hold the left mouse button
- Move the mouse till all the cells highlighted for the data points are selected (move from A2 – A28)
- Release the left button
Step 3: Create the Line Graph

- Chart title: Chart for Talk outs
- Category (X) axis: Date
- Value (Y) axis: Frequency per Hour
- Then click “Next”
Step 3: Create the Line Graph

Click on Gridlines

Uncheck the Major gridlines
Click on Legend

Uncheck Show legend
Then click Next
Step 3: Create the Line Graph

Click As new sheet then Finish

Chart for Talk outs
Step 3: Create the Line Graph  
Adjust the X-axis

When using Dates make the X-axis less cluttered by:
1. Clicking on any date on X-axis

Make sure “Minor tick mark type” is checked
Then click on Scale Tab
Step 3: Create the Line Graph
Adjust the X axis

1. Change the Major unit to 5
2. Change the Minor unit to 1
3. Then click OK

Step 3: Create the Line Graph
Adjust the Y-axis

1. Click on any number on Y axis
Step 3: Create the Line Graph
Adjust the Y-axis

1. Change the Maximum to a # that is larger than the highest number in data set. When Y axis is percentage set Maximum to 100
2. Change the Major unit to a whole number (e.g. 1 or 2)
3. Change the minor unit to a whole number (e.g. 1)
3. Then click OK

Your “Format Axis” box should be similar to this
Step 3: Create the Line Graph
Adjust the Plot Area of the Graph

1. Click anywhere on the graph
Step 3: Create the Line Graph
Adjust the Plot Area of the Graph

1. Click on: Format Plot Area

1. Click on: “None” under Border and Area
2. Then click OK
Step 4: Create the Line Graph
Adjust the Points, Label the Phases and Draw the Phase change lines
Step 4: Create the Line Graph
Adjust the Points

1. Double Click on a point in baseline condition

1. Change the color of the lines to black
2. Change the style of the point to circle
3. Change the foreground of the points to black
4. Change the Background of the points to black

Increase the size of the point (between 6-8)
Step 4: Create the Line Graph
Adjust the Points

1. Follow the previously described procedure with intervention data points
Step 4: Create the Line Graph
Draw the Phase Change Lines

1. Click on the Line icon
Step 4: Create the Line Graph
Draw the Phase Change Lines

2. Draw the Lines by placing The mouse (+) on the X axis and, while pressing the left side of the mouse, move the mouse up.
Step 4: Create the Line Graph
Change the format of Phase Change Lines

1. Click on the Line to change the format

Click on Dashed arrow and then choose

Changes the thickness of the line
Step 4: Create the Line Graph
Label the Phases

1. Click on Text Box Icon

2. Move the Mouse to the middle of the Baseline phase and then right click
Step 4: Create the Line Graph

Label the Phases

Type the Name of the Phase (Baseline)

Do the same process with intervention phase
- Click on Text box, Move the mouse the middle of the phase, right click and then type the name of the phase (e.g. NCR)

Your Graph is Ready to be Printed