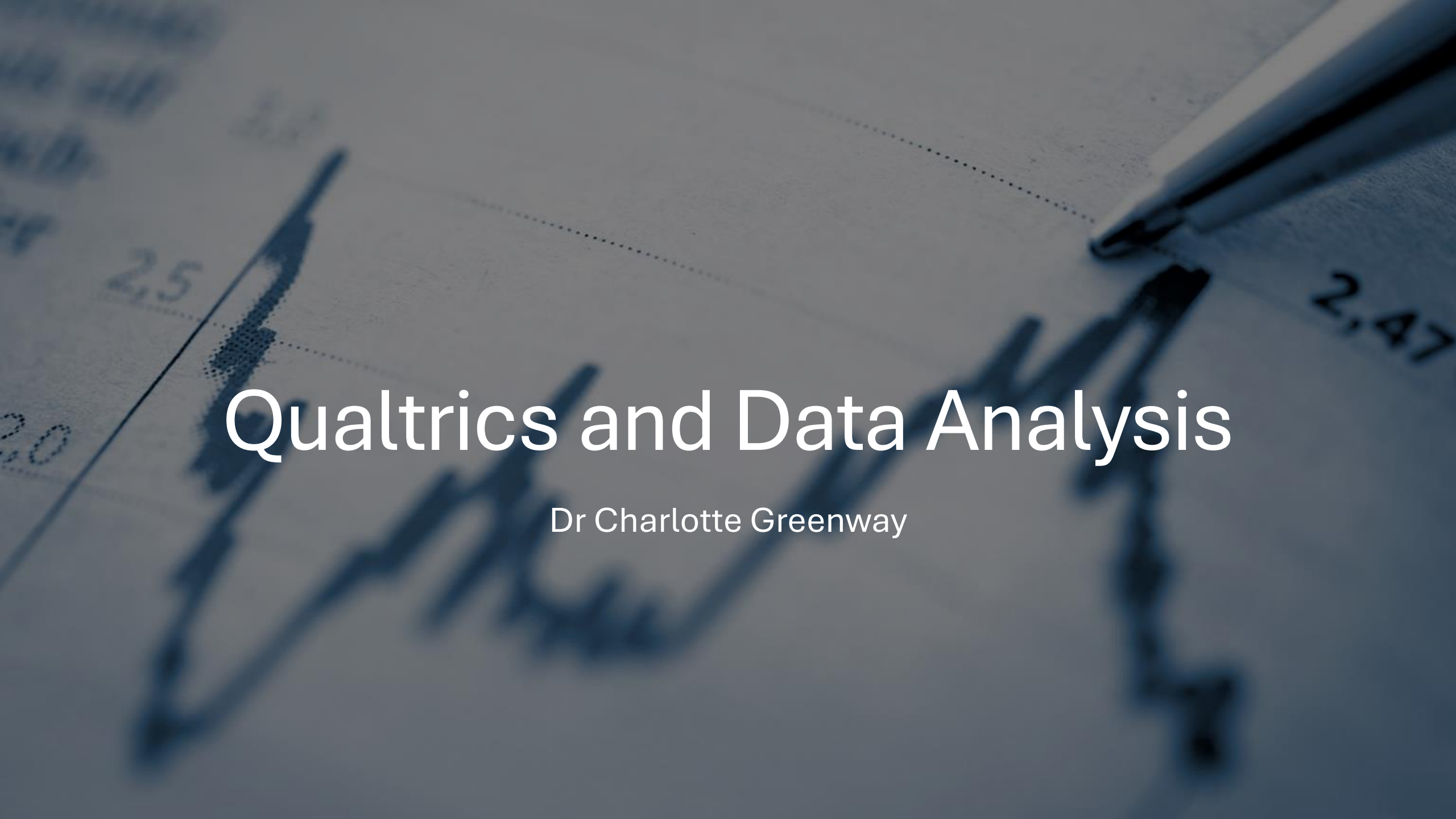


The background is a blurred image of a document. It features a line graph with a dotted trend line. A pen is visible in the upper right corner, appearing to be writing or pointing at the graph. There are some numbers visible on the graph, such as '2.5' and '2.47'.

Qualtrics and Data Analysis

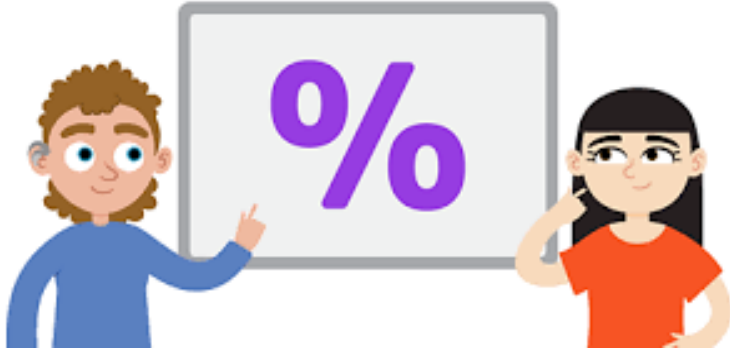
Dr Charlotte Greenway

Qualtrics

Qualtrics is an online platform used to **create surveys, collect data, and analyse responses.**

- **What you can do with it**
- Create surveys with different question types (multiple choice, scales, text)
- Share surveys via links or email
- Collect responses in real time
- Analyse results with built-in statistics and graphs
- Export data (e.g., to Excel or SPSS)

The logo for Qualtrics XM. The word "qualtrics" is in a lowercase, black, sans-serif font. To its right, the letters "XM" are in a stylized, colorful font where the "X" is blue and the "M" is purple, with a slight shadow effect.



Data Analysis

Survey data is analysed statistically.

Common analyses (intro level):

- Frequencies (counts)
- Percentages
- Means (averages)
- Cross-tabulations

Example:

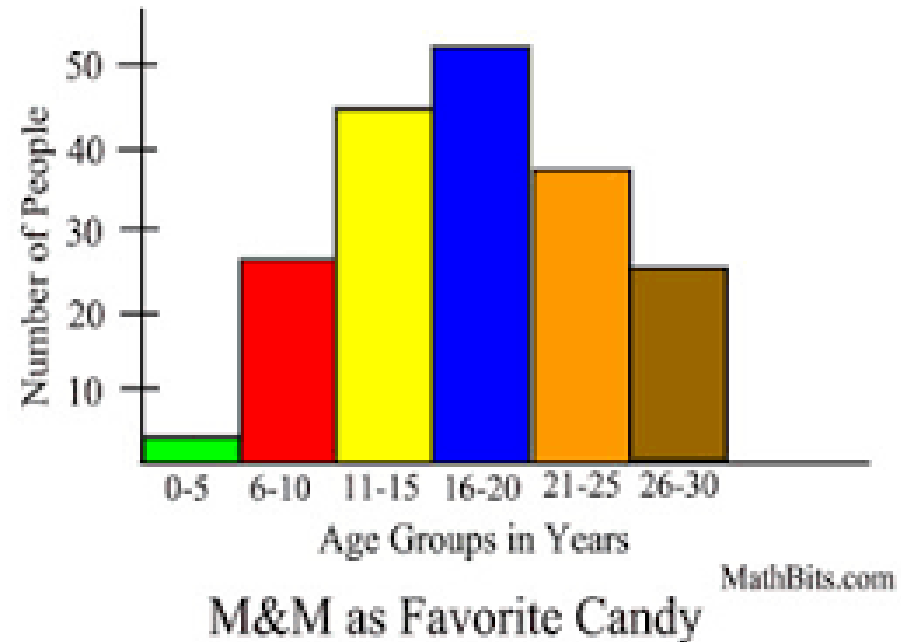
% of young people reporting high anxiety.

Presenting Survey Findings

Common visuals:

- Bar charts
- Pie charts
- Tables
- Histograms

Used to show patterns clearly.



How to Calculate the Descriptive Statistics

1. Mean (Average)

Formula:

$$Mean = \frac{\sum X}{N}$$

Where:

- $\sum X$ = sum of all values
- N = number of participants

Example (Well-being score):

1. Add all scores
2. Divide by total number of parents (**14**)

Example structure:

$$Mean = \frac{30 + 9 + 10 + 24 + 25 + 13 + 16 + 30 + 18 + 24 + 9 + 24 + 15 + 29}{14} \quad \frac{276}{14} = 19.71$$

Students repeat the same steps for **Social Media hours**.

2. Frequency

- Frequency = **how many times each response appears.**
- Example table students should create
- Students count how many times each social media platform was used.

3. Percentages

- Formula:
 - $\text{Percentage} = \frac{\text{Frequency}}{\text{Total Sample}} \times 100$
- Example:
 - If **9 chose Instagram**
 - 9
 $30 \times 100 = 30\%$
- Students calculate this for each category.

SM Platform used	Frequency
Instagram	9
TikTok	9
Snapchat	9
Other	3
Total	30

- **Bar Chart**

- Students should create a bar chart with:

- **X-axis:** How often do you post content?

- **Y-axis:** Count

- Steps in SPSS

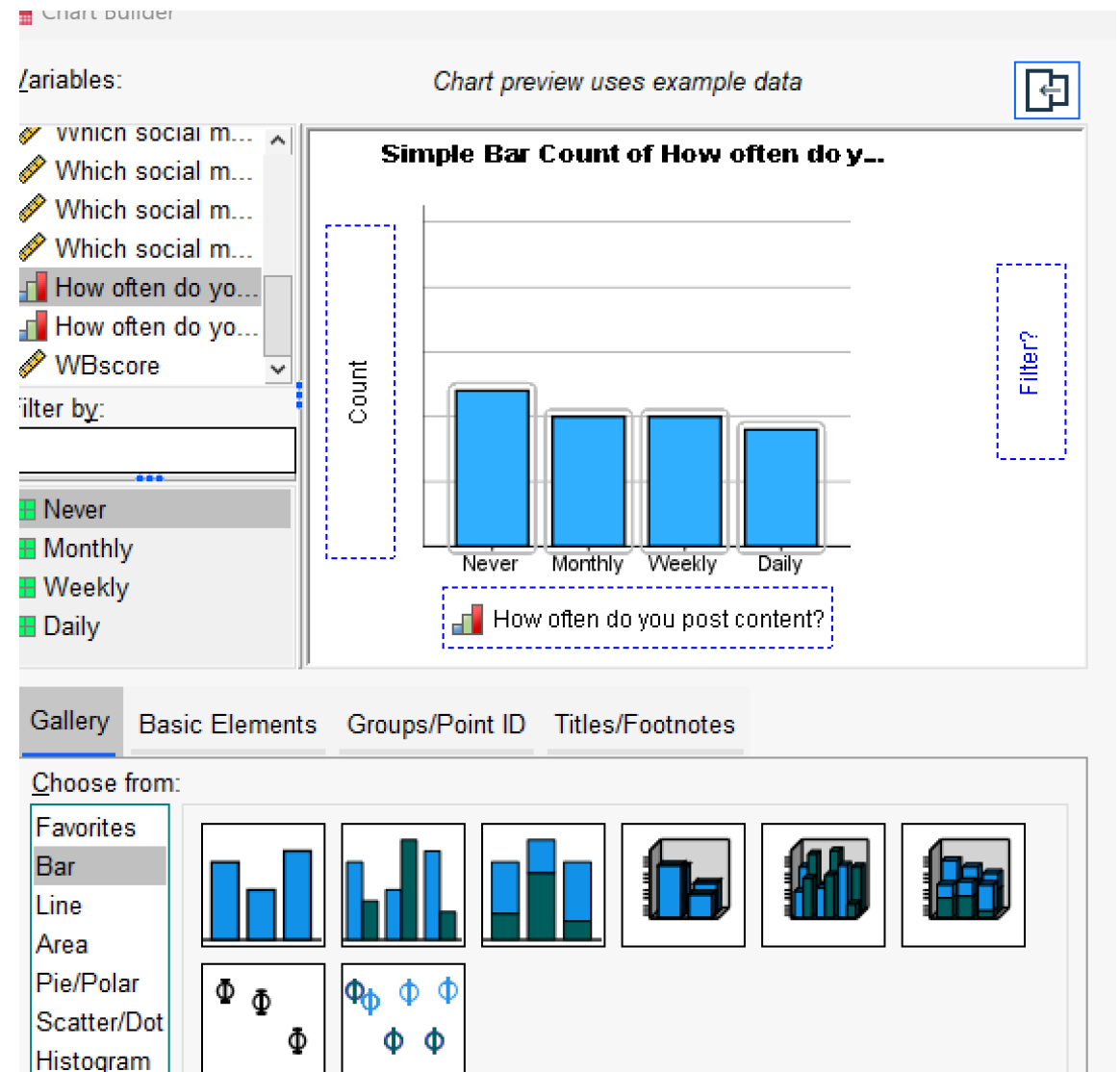
- Click on Graphs: Chart builder - OK

- Highlight the table.

- Click **Graphs** → **Chart builder** → **OK**.

- Choose **Bar Chart** → **Double click simple bar**.

- Drag How often do you post content? From the left column into the X-axis box → **OK**.



Inferential Statistics: Correlation

A **correlation** is a way of describing **how two variables are related to each other**.

What it means

- If two things **change together**, they are correlated:
- If one goes **up** and the other also goes **up** → **positive correlation**
- If one goes **up** and the other goes **down** → **negative correlation**
- If there's **no clear pattern** → **no correlation**

Example:

- Hours studied ↑ and exam scores ↑ → positive correlation
- Time on social media ↑ and sleep ↓ → negative correlation

When it's used

Correlation is used when you want to:

- **See relationships** between variables
- **Identify patterns or trends**
- **Make predictions** (but cautiously)
- **Support research findings**



Important point

Correlation **does NOT** mean **causation**.

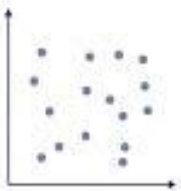
Just because two things are related doesn't mean one **causes** the other.

Example: Ice cream sales and sunburn both increase in summer — but ice cream doesn't cause sunburn.

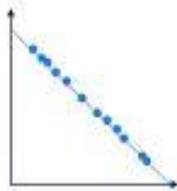
Perfect positive correlation



Zero correlation



Perfect negative correlation



[illegible][illegible]