Cabinet Office

Background

The ONS Annual Population Survey (APS) is asking four questions on subjective well-being (SWB):

- "Overall, how satisfied are you with your life nowadays?"
- "Overall, to what extent do you feel that the things you do in your life are worthwhile?"
- "Overall, how happy did you feel yesterday?"
- "Overall, how anxious did you feel yesterday?"

Respondents reply on a scale of 0 to 10 where 0 represents 'not at all' and 10 represents 'completely'. One way of summarising the results is by presenting the mean levels among different population groups, for example – Figure 1.
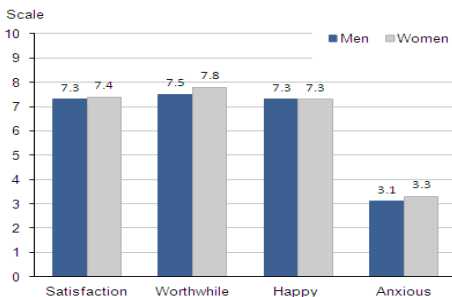

Figure 1. Mean Subjective Wellbeing responses by gender

The means shown above are somewhat limited descriptions of the data. The full distribution of Life Satisfaction (LS) scores shown below in Figure 2 provide much more detail. This clearly shows that 7 and 8 were the most popular answers but is of limited use when trying to communicate a meaningful summary of the data.
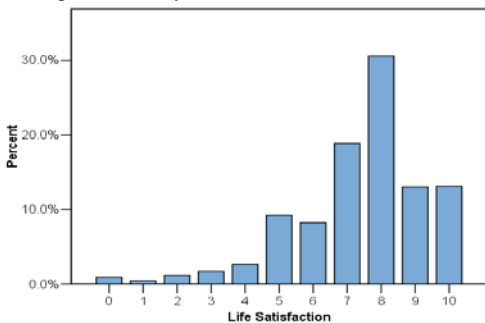

Figure 2. Distribution of scores for Life Satisfaction

Defining High & Low Subjective Wellbeing

Rather than presenting the full distribution it may be more useful to group scores together into meaningful categories such as High, Medium and Low. How these categories are defined will have implications for the analysis and interpretation of results. If, for example, the scores were grouped based on their position on the scale, the groups could be defined as follows:

Scores	0,1,2,3	4,5,6	7,8,9,10
Group	Low	Medium	High

If the distribution is grouped into three equal sized bands (terciles) by their LS scores, however, the score at the 33rd percentile is 7 and the score at the 67th percentile is 8. This could lead to the groups being defined as:

Scores	0,1,2,3,4,5,6	7,8	9,10
Group	Low	Medium	High

A score of 6 is correctly identified as belonging in the bottom third of the distribution but calling it "low" may seem odd given its position in the top half of the scale. Analyses resulting from the two definitions of low LS are compared below.
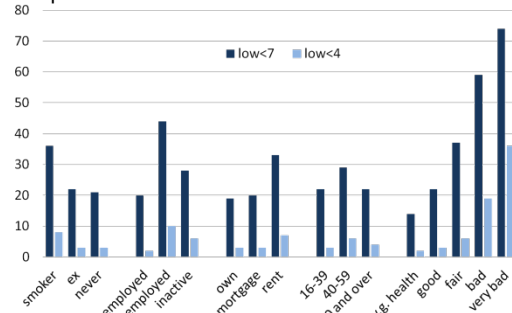

Figure 3. Percentage of each group with low Life Satisfaction

Figure 3 shows the percentages of adults with low LS in each of the groups. Unsurprisingly, when a score less than 4 is defined as low, fewer people have low LS than when it is defined as less than 7. However, the chart also shows that the definition chosen changes the relative differences in low LS between one group and another. For example, if low LS is defined as less than 7 then 44% of unemployed people and 20% of employed people experience low LS, i.e. low LS is twice as common among unemployed people as it is among the employed.

If low LS is defined as less than 4 then 10% of unemployed people and 2% of employed people experience low LS i.e. low LS is five times as common among unemployed people as it is among employed people.

Four Life Satisfaction Groups

Part of the problem of defining the three groups may come from having chosen to have 3 groups in the first place. The distribution shown in Figure 2 may be better described by 4 groups:

Scores	0,1,2,3,4	5,6	7,8	9,10
Group name	Very Low	Low	Medium	High
Alternative name	Low	Medium	High	Very High

Figure 4 compares these four groups. It shows the percentage of each group who are unemployed, are in bad or very bad health, have no qualifications, rent their accommodation, smoke and are aged between 40 and 59 years.
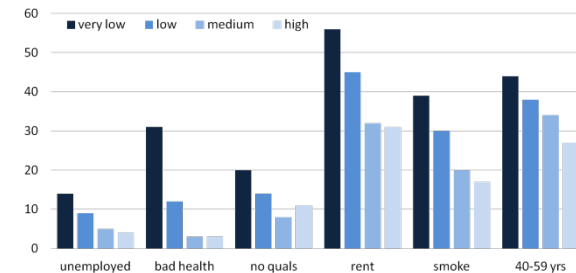

Figure 4. Percentage of Life Satisfaction group belonging to each category

All six of the factors in this example are more common in the very low LS group than in the low LS group and are more common in the low LS group than in the medium and high LS groups. This suggests that these are discrete groups which may be useful for analysis.

Conclusion

We can present and analyse subjective wellbeing data in a variety of ways including average levels and by groups representing high, medium and low values. We find that grouping the data, particularly into 4 bands is a useful approach to presenting and communicating the SWB data. From a policy perspective this enables us to more easily identify those with low levels of wellbeing, and potentially target policies to tackle it. A common definition for low wellbeing would be useful and we provide a possible definition – people scoring 0 to 4 on the 10-point LS scale.