Measuring National Well-being: Insights into children's mental health and well-being

Mental health problems in children can affect their overall well-being in both the immediate and longer-term. The Children’s Well-being 2015 publication includes a new measure of children’s mental ill-health. This is in response to feedback from stakeholders who identified mental health as missing from the initial set of measures for children. The new measure uses the total difficulties score from the child self-completion aspect of the Strengths and Difficulties Questionnaire (SDQ) from the UK Household Longitudinal Survey (Understanding Society). This article provides an in-depth look at why mental health is an important aspect of children’s well-being, outlines the reasons why the SDQ was chosen and looks at what the data tells us about the prevalence of mental ill-health and how it relates to other factors, such as bullying and family relationships.

Table of contents

1. Main points
2. What is mental health?
3. Why is mental ill-health important?
4. How is mental ill-health measured?
5. What do the data tell us?
6. Bullying
7. Parental relationships
8. Body image
9. Happiness with school
10. Social media
11. Conclusion
12. Appendix A
13. Background notes

14. References
1. Main points

- there were 1 in 8 children aged 10 to 15 who reported symptoms of mental ill-health in 2011 to 2012, as measured by a high or very high total difficulties score
- being bullied was strongly related to mental ill-health; children who were bullied frequently were 4 times more likely to report a high or very high score
- children who quarrelled with their mother more than once a week were 3 times more likely to report a high or very high score than children who quarrelled less frequently
- one third of children who were relatively unhappy with their appearance reported high or very high total difficulties score, compared with 1 in 12 children who were relatively happy with their appearance
- children who spent over 3 hours on social websites on a normal school night were more than twice as likely to report a high or very high score as children spending less time on social websites

2. What is mental health?

There are two aspects to mental health: mental illness or ill-health\(^1\), and mental or psychological well-being.

Mental ill-health measures consider whether a person has a higher likelihood of a clinically diagnosable illness\(^2\), from anxiety or depression to problems such as bi-polar disorder or schizophrenia. Mental ill-health in children can manifest in different ways to adults, often resulting in behavioural and conduct problems, such as Attention Deficit Hyperactivity Disorder (ADHD) or Oppositional Defiant Disorder (ODD), as well as emotional problems such as depression or anxiety. These conditions can also be symptoms of underlying problems, which may be environmental (for example, parental conflict) or developmental (for example, Autistic Spectrum Disorders). In this article we discuss the prevalence of mental ill-health, as shown by the total difficulties score from the SDQ.

Mental well-being is concerned with how people feel about their lives and whether their lives are worthwhile. It is not just the absence of mental health problems and can be described as “a dynamic state, in which the individual is able to develop their potential, work productively and creatively, build strong and positive relationships with others, and contribute to their community” (Foresight report, 2008). The 31 measures of children’s well-being (428 Kb Excel sheet) capture many aspects of mental well-being using measures such as quarrelling with parents, talking to parents about things that matter, happiness with family and friends, satisfaction with time use, desire to go on to further education, and considering the things that one does are worthwhile. Furthermore, subjective measures of both life satisfaction and happiness are included.

Notes for What is mental health?

1. This aspect may also be termed ‘mental health problems’ or ‘mental disorders’
2. For example as defined by the International Classification of Disease (ICD10) or the Diagnostic and Statistical Manual of Mental Disorders (DSM-V)

3. Why is mental ill-health important?

The World Happiness Report cites research that found over half of children who have a mental health problem will suffer from mental ill-health as adults. Furthermore, it explains that mental health problems such as depression can be more disabling than physical problems such as arthritis or asthma.
The study found that 1 in 10 children aged 5 to 16 years had a clinically diagnosable mental disorder. Boys were more likely to have a problem than girls and prevalence increased with age. Girls were more likely to have emotional problems whereas boys were more likely to report conduct or hyperactivity problems. The study also found that children with mental disorders were more likely than children without mental disorders to have time off school, especially unauthorised absences, and were less likely to have a network of family and friends with whom they felt close.

More recently, Mental Health Difficulties in Early Adolescence compared mental ill-health prevalence from two different cross-sectional samples of children aged 11 to 13 years in 2009 and 2014 and found that there were similar levels of mental ill-health in both cohorts (19.7% compared with 19.0%). However, the study did identify a significant increase in emotional problems amongst girls and a decrease in the proportion of boys reporting “at-risk” levels of total difficulties scores. The authors suggest that an increased focus on interventions to tackle disruptive behaviour has helped boys, but there have been no similar interventions to tackle emotional problems, which are more likely to affect girls.

In March 2015 the government pledged £1.25 billion to improve children and young people’s mental health services over the next 5 years. In tandem with this announcement the Department of Health and NHS England published ‘Future in mind’, detailing the work of the children and young people’s mental health and well-being taskforce, which was set up to identify ways of improving mental health services and access to these services for children and young people. Proposals include:

- a hard hitting anti-stigma campaign which raises awareness and promotes improved attitudes to children and young people affected by mental health difficulties
- a five year programme to develop a comprehensive set of access and waiting times standards that bring the same rigour to mental health as is seen in physical health
- commissioning a new national prevalence survey of child and adolescent mental health
- encouraging schools to continue to develop whole school approaches to promoting mental health and wellbeing

More recently, local transformation plan guidance has been published to help local areas implement changes and ensure the momentum of improvement is maintained.

4. How is mental ill-health measured?

The national measures of well-being include the proportion of adults aged 16 and over reporting symptoms of mental ill-health using the General Health Questionnaire (GHQ12). However, this has not been validated for use in children; it is focused on symptoms experienced by adults and would not be appropriate or informative if used for children. To measure children’s mental ill-health, a more “child-centric” measure had to be identified. The Strengths and Difficulties Questionnaire (SDQ) was designed by Professor Robert Goodman as a behavioural screening questionnaire for use with children aged 2 to 17.¹ It consists of questionnaires administered to the child, a parent and a teacher. As its name suggests, it measures a child’s strengths and difficulties in a number of areas:

1. emotional symptoms
2. conduct problems
3. hyperactivity or inattention
4. peer relationship problems
5. pro-social behaviour
The first four of these areas can be combined together to provide a “total difficulties” score, which can then be used as a predictor of mental ill-health. The SDQ has been extensively validated and was used as the screening tool for the Mental health of children and young people in Great Britain, 2004 (5.7 Mb Pdf) report. It must be noted that only the child self-reported questionnaire (not those from the parent or teacher) is being used to provide the total difficulties score for use as a measure of mental ill-health in the children’s well-being framework. The sensitivity of predicting clinical diagnosis is much higher using a multi-informant SDQ, and so the total difficulties score presented here should only be considered an indication of the prevalence of mental ill-health.

The self-completion SDQ is included in every other wave of the Understanding Society Youth module, providing regular and reliable estimates for a headline measure of children’s mental ill-health. Furthermore, the longitudinal design of the Understanding Society survey will allow for further exploration of changes in total difficulties scores as the survey progresses.

The total difficulties score can be reported as an average (mean) score, or categorised into 4 groups:

1. close to average or normal (score 0 to 14 out of 40)
2. slightly raised (score 15 to 17 out of 40)
3. high (score 18 to 19 out of 40)
4. very high (score 20 or more out of 40)

For the purposes of children’s well-being, the headline measure for the prevalence of mental ill-health is the proportion of children reporting a high or very high total difficulties score, although the mean score will also be provided for completeness.

Notes for How is mental ill-health measured?

1. The standard SDQ can be used with children aged 4 to 17 years, and the early years SDQ is suitable for children aged 2 to 4 years
2. The sensitivity of the SDQ varies according to the diagnoses. It is less sensitive for problems such as specific phobias, eating disorders and separation anxiety
3. The SDQ was included in Wave 1 (2009-10) and Wave 3 (2011-12) of the Understanding Society survey

5. What do the data tell us?

The latest data from Understanding Society (2011 to 2012) shows that around 12% of children aged 10 to 15 reported high or very high total difficulties scores. The proportion was the same for both boys and girls (12%) and did not significantly differ from the proportions reported in the 2009 to 2010 wave of Understanding Society. Similarly, the average score was 10.6 out of 40 in 2011 to 2012, broadly similar to the 2009 to 2010 average score of 11.0. There are, however, some interesting differences in the associations between the average total difficulties scores and other factors.

Of the 31 children’s measures of well-being (including the total difficulties score), 12 are sourced from the Understanding Society survey. Measures other than total difficulties score are:
• happiness with appearance
• quarrel with mother/father
• talk to mother/father about things that are important
• bullied at school (physically, in other ways or both)
• time spent on social websites
• feel safe walking in your neighbourhood after dark
• like your neighbourhood
• happiness with school
• want to go on to full-time education

In the 2011 to 2012 wave of the survey, all 12 measures were included so a more detailed analysis of the associations between the total difficulties scores and these other measures was possible. All of the variables shown in Table 1 (in Appendix A), including age and gender, were included in a regression analysis, which allows us to look at the relative importance of these different factors for children's mental health. It must be noted that these measures are not a definitive list of factors affecting children's mental health. Other factors may be as or more important, but have not been included as they are either not a measure of children's well-being, or not available in the Understanding Society dataset.

6. Bullying

Bullying has been found to be an important factor associated with children's mental health. One study – reported in "Peer victimisation during adolescence and its impact on depression in early adulthood" – found that children who had been bullied at age 13 were more than twice as likely to have depression at age 18. A meta-analysis (where several studies are combined) of longitudinal research on bullying and internalised problems (for example, depression and anxiety) reported a "symmetrical bi-directional relationship between peer victimization and internalizing problems". That is to say, after taking initial levels of depression and anxiety into account, children who were bullied were more likely to report an increase in depression and anxiety over time and conversely, after taking initial levels of being bullied into account, children who had depression or anxiety were more likely to be bullied over time.

In 2011 to 2012 around 1 in 8 children (12%) reported being bullied at school physically, in other ways, or both more than 4 times in the last 6 months. The proportions were similar for boys and girls (13% and 11% respectively) and there had been no change since 2009 to 2010 (11% of all children).
In 2011 to 2012, children who were bullied more than 4 times in the last 6 months reported significantly higher average total difficulties scores (16.2) than those children who had never been bullied or had been bullied less frequently (9.8). Furthermore, Figure 1 shows that those who were bullied frequently in the last 6 months were over 4 times more likely to report high or very high total difficulties scores (41%) than those who were bullied less frequently or not at all (9%).

Frequency of being bullied was by far the strongest predictor of higher total difficulties scores of all the measures included in the regression analysis.

7. Parental relationships

In 2013, The Children’s Society reported that a child’s relationship with their parents is an important factor associated with overall well-being. Children’s relationships with their parents are particularly prominent and powerful influences on children’s mental health, and disruptions or tumultuous relationships can often lead to behavioural difficulties. Parents are often children’s primary care givers and attachment figures, and quarrels between a child and their mother or father can disrupt children’s lives. Indeed, closeness to mothers and closeness to fathers have both been shown to have independent contributions to children’s happiness, life satisfaction, and psychological distress over and above demographic variables (Amato, 1994).
Just over a quarter (27%) of children reported quarrelling with their mother more than once a week in 2011 to 2012, a decrease from around 31% in 2009 to 2010. This compares with only 19% who reported quarrelling with their father in 2011 to 2012 – a similar proportion to 2009 to 2010. However, children were also more likely to talk to their mother about things that matter more than once a week. In 2011 to 2012, just over 63% reported talking to their mother about things that matter frequently, whereas only 40% reported talking to their father about things that matter frequently. While there is no difference between the proportions of boys and girls quarrelling frequently with either parent, boys are less likely to talk to their mothers than girls (60% compared with 67%) whereas girls are less likely to talk to their fathers than boys (36% compared with 44%).

There is no evidence to prove a causal link between poor child-parent relationships and mental ill-health; however, there is an association between them. A child with a mental health issue may not be able to articulate their needs and emotions as well as a child with good mental health, and thus they may be more argumentative and disruptive. A poor relationship with parents may exacerbate mental health issues and lead children to exhibit undesirable behaviour or inappropriate emotional responses. The data from Understanding Society shows how difficult child-parent relationships are associated with mental ill-health.

**Figure 2: Proportion of children with high or very high total difficulties scores by parental relationship, 2011 to 2012**

United Kingdom

Source: Understanding Society, the UK Household Longitudinal Study

Notes:

1. Children aged 10 to 15 years
The 4 parental relationship variables in the measurement are: quarrelling with mother, quarrelling with father, talking to mother about things that matter and talking to father about things that matter. Children who quarrelled with their mother or father more than once a week in 2011 to 2012 reported average total difficulties scores of 13.3 and 13.1 respectively. This compares with average scores of 9.5 and 9.8 for those children who reported quarrelling with their mother or their father less than once a week. Figure 2 illustrates the proportions of children with high or very high total difficulties scores according to how frequently they quarrelled with or talked to each of their parents. Children who quarrelled more than once a week with their mother were around 3 times more likely to report a high or very high score (24%) than those who quarrelled less than once a week (8%). Similarly, children who quarrelled with their father more than once a week were more than twice as likely to report a high or very high score (22%) than those who quarrelled less than once a week (9%).

Being able to talk to parents about things that matter may be a “protective” factor for children, helping to dampen any detrimental consequences associated with mental ill-health. In 2011 to 2012, those children who talked to their parents more than once a week reported lower average total difficulties scores (10.1 mother, 9.5 father) than children who talked to their parents about things that matter less than once a week (11.3 mother, 11.0 father). The proportion of children who had high or very high total difficulties scores was higher among those who talked to the mother less than once a week compared with those who talked to their mother more than once a week (15% compared with 11%). There was a similar difference in those reporting high or very high total difficulties scores between those who talked with their father less than once a week and those who talked to their father more than once a week (13% compared with 10%).

The regression analysis showed that quarrelling with either parent was more strongly related to total difficulties than talking with either parent, with a higher frequency of quarrelling associated with a higher score. Quarrelling with mother had the strongest relationship with total difficulties scores of the 4 parental relationship variables, and the second strongest of all the variables in the analysis. Quarrelling with father had the next strongest relationship with higher scores. However, talking more frequently with either parent was associated with a lower total difficulties score and talking frequently to father was more strongly related to lower scores than talking frequently to mother.

Research has suggested that children’s relationships with their mother and fathers can vary according to the gender of the child (Russell & Saebel, 1997). We investigated if the 4 parental relationship variables interacted with sex of the child by running two more regression analyses; one analysis for the “talking to mother or father about things that matter” variables and one for the “quarrelling with mother or father” variables. These analyses revealed no differences between boys or girls in the association between quarrelling with either parent and total difficulties scores. However, there were differences between boys and girls for the associations between talking with parents and total difficulties scores. Talking frequently with fathers reduced total difficulties scores for both boys and girls, whereas talking frequently with mothers was only significantly related to lower total difficulties scores for girls.

8. Body image

Poor body image has been found to be negatively associated with self-esteem and depression, particularly amongst teenage girls. Siegel et al.’s study of American teenagers found that there was a difference between girls and boys body image, self-esteem and depression levels and the more positive a child’s body image, the less depressed they were and the higher self-esteem they had. Furthermore, they found that poor body image accounted for the higher prevalence of depression and low self-esteem amongst girls.

Data from Understanding Society shows that around 1 in 10 children aged 10 to 15 years old are unhappy with their appearance (11% in 2011 to 2012 and 10% in 2012 to 2013). The proportion of girls reporting that they are unhappy with their appearance is around double that of boys (14% of girls compared with 7% of boys in 2012 to 2013).
Children who reported being relatively happy with their appearance in 2011 to 2012 had a lower average total difficulties score (9.5) than those children who were relatively unhappy with their appearance (15.1). Furthermore, those children who were relatively unhappy with their appearance were over 4 times as likely to report high or very high total difficulties scores than children who were relatively happy with their appearance (33% compared with 8%), as shown in Figure 3. The data from Understanding Society showed no significant differences between the average total difficulties scores of boys and girls who were relatively unhappy with their appearance. The regression analysis showed that greater happiness with appearance was associated with lower total difficulties scores, and had the third strongest relationship with total difficulties scores of all the variables analysed. Further analyses indicated that this association did not vary between boys and girls.

9. Happiness with school

Children spend a significant amount of time at school and their happiness within the school is an important part of their life. It reflects a range of determinants, including peer relationships, academic ability, socioeconomic status, and sporting ability. A study of the Avon Longitudinal Study of Parents and Children looked at pupil and school effects during primary school. It found that different children have different experiences even at the same school, and that for well-being, "child-school" fit is as important as attending a "good" school (Gutman and Feinstein, 2008).
Since 2009 to 2010, around 8 out of 10 children have reported being relatively happy with their school and 1 in 10 reported being relatively unhappy with their school. There is no difference between the proportions of boys and girls reporting being happy or unhappy with their school.

**Figure 4: Total difficulties score category by happiness with school, 2011 to 2012**

United Kingdom

Children who reported being relatively unhappy with school in the 2011 to 2012 Understanding Society Survey had an average total difficulties score over 50% higher than children who reported being relatively happy with school (16.0 compared with 9.8). Figure 4 illustrates that children who were relatively unhappy with school were over 4 times more likely to report high or very high total difficulties scores than those children who were relatively happy with school (38% compared with 9%). The regression analysis showed that happiness with school was significantly associated with lower total difficulties, and had the fourth strongest relationship with total difficulties scores of the variables tested.

**Notes for Happiness with school**

1. The remaining 10% reported being ‘neither happy nor unhappy’ with the school that they go to
10. Social media

Social websites are ever-present features of social life, especially for the young. While they may provide an additional way to connect with others and form relationships and thus increase children’s mental health, they could also be a source of social comparison, cyber bullying and isolation, reducing children’s mental health (Best, Manktelow, & Taylor, 2014). The Public Health England report, *How healthy behaviour supports children’s well-being*, identifies a large body of research that shows a negative association between screen time (including watching television, DVDs and videos) and mental well-being. It also reports that “children who spend more time on computers, watching TV and playing video games tend to experience higher levels of emotional distress, anxiety and depression” and that this is particularly the case for those children spending more than 4 hours a day engaged in those activities.

The Understanding Society survey asks children how much time they spend on social networking websites on a normal school day. Between 2009 to 2010 and 2011 to 2012, the proportion of children spending no time on social networking websites decreased from 38% to 32%. In the same period, the proportion spending up to 3 hours on social networking websites increased from 56% to 61%. However, in the latest wave of the survey (2012 to 2013), these proportions returned to 2009 to 2010 levels, with 37% of children spending no time on social networking websites and 56% spending up to 3 hours.

In 2012 to 2013, around 8% of children spent over 3 hours on social networking websites on a typical school day. Girls were far more likely than boys to spend over 3 hours on social networking websites. In 2012 to 2013, around 1 in 10 girls (11%) spent over 3 hours on social networking websites compared with just 5% of boys.
Analysis of the 2011 to 2012 total difficulties scores of children grouped by “time spent on social websites on a normal school day” also shows that there is a clear association between longer time on social websites and higher total difficulties scores. There was no difference in average scores for children who spent up to 3 hours on a social website compared with those who did not use them (10.5 compared with 10.2). However, those children who spent more than 3 hours on social websites on a normal school day reported significantly higher total difficulties scores (13.3) than either those who did not use social websites or who spent less time on them. Looking at the proportions of children in each category, shown in Figure 5, the association becomes even more apparent. Of those children who spent more than 3 hours on a social website on a normal school day, around 27% reported high or very high total difficulties scores. This is more than double the proportion of those children spending no time on social websites on a normal school day (12%) and the proportion spending up to 3 hours a day on a social website (11%). The regression analysis also showed that spending more time on social websites was associated with a higher total difficulties score.
11. Conclusion

Mental ill-health is an important area of children's well-being that is affected by a variety of factors. Of the wellbeing measures available from the Understanding Society survey, bullying and quarrelling with mothers had the strongest associations with mental ill-health. These results are consistent with findings from academic research and previous national surveys of children's mental ill-health. Future analysis could utilise the longitudinal aspect of the Understanding Society survey to see how total difficulties scores change as children move into and out of poor peer and familial relationships.

12. Appendix A

Table 1: Estimates from ordinary least squares regression analyses

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>t</th>
<th>p</th>
<th>SE of b</th>
<th>95% confidence interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-0.03</td>
<td>-2.14</td>
<td>0.05</td>
<td>-0.20</td>
<td>-0.01</td>
</tr>
<tr>
<td>Age squared</td>
<td>0.05</td>
<td>3.53</td>
<td>0.03</td>
<td>0.05</td>
<td>0.16</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.04</td>
<td>-2.53</td>
<td>0.01</td>
<td>-0.69</td>
<td>-0.09</td>
</tr>
<tr>
<td>Bullied, physical or other</td>
<td>0.31</td>
<td>21.51</td>
<td>0.13</td>
<td>0.05</td>
<td>3.11</td>
</tr>
<tr>
<td>Quarrels with mother</td>
<td>0.19</td>
<td>12.57</td>
<td>0.08</td>
<td>0.29</td>
<td>1.22</td>
</tr>
<tr>
<td>Quarrels with father</td>
<td>0.08</td>
<td>5.18</td>
<td>0.09</td>
<td>0.05</td>
<td>0.64</td>
</tr>
<tr>
<td>Time spent on social websites</td>
<td>0.06</td>
<td>4.42</td>
<td>0.08</td>
<td>0.21</td>
<td>0.53</td>
</tr>
<tr>
<td>Talks with mother</td>
<td>-0.04</td>
<td>-2.44</td>
<td>0.08</td>
<td>-0.35</td>
<td>-0.04</td>
</tr>
<tr>
<td>Feel safe in neighbourhood</td>
<td>-0.04</td>
<td>-2.93</td>
<td>0.24</td>
<td>-1.18</td>
<td>-0.23</td>
</tr>
<tr>
<td>Talks with father</td>
<td>-0.07</td>
<td>-4.53</td>
<td>0.08</td>
<td>-0.51</td>
<td>-0.20</td>
</tr>
<tr>
<td>Feel safe walking alone in the dark</td>
<td>-0.08</td>
<td>-5.42</td>
<td>0.09</td>
<td>-0.65</td>
<td>-0.30</td>
</tr>
<tr>
<td>Happiness with school</td>
<td>-0.18</td>
<td>-12.75</td>
<td>0.06</td>
<td>-0.83</td>
<td>-0.61</td>
</tr>
<tr>
<td>Happiness with appearance</td>
<td>-0.19</td>
<td>-12.79</td>
<td>0.06</td>
<td>-0.82</td>
<td>-0.60</td>
</tr>
</tbody>
</table>

Source: Office for National Statistics

Notes:
1. B Standardized coefficients
2. t t-statistic
3. p 2-tailed significance
4. b coefficients
5. SE of b Standard Error of coefficients

All of the variables together explain around 40% of the variation in total difficulties scores among the sample, and each is a statistically significant predictor.

13. Background notes

1. Author: Rachel Beardsmore.

2. ONS would like to thank Dr. Matthew Easterbrook of the University of Sussex for his work producing the regression analysis included within this report.
3. The Understanding Society survey is a unique and valuable academic study that captures important information every year about the social and economic circumstances and attitudes of people living in 40,000 UK households. It also collects additional health information from around 20,000 of the people who take part. Information from the longitudinal survey is primarily used by academics, researchers and policymakers in their work, but the findings are of interest to a much wider group of people. These include those working in the third sector, health practitioners, business, the media and the general public. The data in this analysis is from the youth self-completion questionnaire module of Waves 1-4 of the survey and has been weighted using the combined cross-sectional youth interview weight.

4. Throughout the bulletin, only statistically significant findings are commented on.

5. Details of the policy governing the release of new data are available by visiting www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html or from the Media Relations Office email: media.relations@ons.gsi.gov.uk

14. References


