Field trial of graded care profile (GCP) scale: a new measure of care

O P Srivastava, L Polnay

Abstract

Aim—The graded care profile (GCP) scale was developed as a practical tool in response to the Children Act 1989 to provide a measure of care in four areas: physical, safety, love, and esteem, on a bipolar continuum. This field trial was to assess its user friendliness and inter-rater agreement.

Methods—43 nursery children and 11 registered for neglect were each scored on this scale independently by two different raters (health visitor and nursery teacher or social worker). Their inter-rater agreement was assessed by weighted κ and user friendliness by time taken for and completeness of scoring.

Results—An almost perfect level of agreement was achieved in physical care (κ = 0.899; confidence interval (CI) = 0.850 to 0.948), safety (κ = 0.894; CI = 0.854 to 0.933), esteem (κ = 0.877; CI = 0.808 to 0.946), and a substantial level in love (κ = 0.785; CI = 0.720 to 0.849). Mean time taken for scoring was 20 minutes (range 10 to 30); of 54 paired scales, area of safety was not scored only in three by one of the raters.

Conclusions—This scale appeared user friendly and provided grading of care with high inter-rater agreement. Its use in practice could provide an opportunity for useful comparison with other means of assessment of care, studying outcomes of different care profiles, targeting intervention, and monitoring change.

Keywords: parenting; child protection; neglect

The Children Act 1989 has introduced two concepts in child protection—parental responsibility, and harm attributable to care. This raises issues of the exercise of parental responsibility and the need for objectivity in assessing harm attributable to care. This scale was developed by exploring issues around the care process in an attempt to find a more objective way of assessment.

Care has been divided into four areas based on the needs of the child, adopted from Maslow’s hierarchy of human needs. These areas are: physical care, safety, love, and esteem. The graded care profile (GCP) scale provides separate grading for each of these areas.

In this scale there are five grades of care, distributed on a bipolar continuum based on Bel-sky’s model. Grade 1 is at the positive and grade 5 at the negative end of the continuum. Scoring is done on actual care delivered and the carers’ effort, intention, and commitment in relation to their child’s needs. For ease of use, constructs are prepared for each of the grades against items of care and printed as a coding manual.

This is a new scale designed to be used by all individuals working with or caring for children, including parents. The purpose of this field trial was to assess its user friendliness and inter-rater agreement.

Methods

Subjects

A field trial was conducted from April 1994 to February 1995. The procedure was fitted in with routine working practices to maintain a near normal setting. All children were visited at home by nursery staff before they started at their nursery. We preferred this prenursery stage, as care was entirely home based. We selected four of the nurseries which volunteered to give a fair spread of socioeconomic status (nursery group). Children of similar age who were on the register for neglect were also included, to test the whole range of grades rather than to act as controls (neglect group). From a complete list of subjects for both groups, those whose parents/guardians had consented were selected for their home care rating on the GCP scale.

Raters

For nursery group subjects the raters were their prospective nursery teacher and health visitor. For the neglect group, raters were their social worker and health visitor. A group training session was arranged for prospective raters. Those who could not attend were trained individually.

Once subjects in the nursery group had been rated by their prospective nursery teacher, the scale was returned to the main health centre. This triggered a visit and an independent rating by their health visitor within the next two weeks. In the neglect group, the social worker of the subject was first asked to rate and then the health visitor. All raters were asked to indicate the time they took to score, and to score for as many areas as they could reliably manage. All completed scales were collated by a clerk at the main health centre.

The Scale

There are three parts to the scale (fig 1)—the record sheet, the coding manual, and instructions. The record sheet is a single sheet of paper...
which displays areas and their component sub-areas of care, with five grades alongside. The grades for subareas are obtained by matching the information on carer-child observation with the closest graded category in the coding manual. From these, a final score is derived for each of the main areas, applying the rules described in the instructions.

### ANALYSIS

The ability of the scale to yield consistent results was tested through comparison of the scores obtained by each pair of raters. Statistical analysis was carried out by weighted $\kappa$, which gives a measure of inter-rater agreement taking minor variations into account. $\kappa$ User friendliness was assessed by the time taken and completeness of scoring the different areas. A target of half an hour was set. Raters were also asked to record any comments they might have on the scale.

### Results

Parents of all 55 children in the nursery group consented, but for 12 of these one of the raters could not find time to pair the rating. In three of the 43 paired scales nursery teachers did not score for safety, leaving only 40 paired scales for this area. Of 15 children in the neglect group, the parents of two did not consent and a further two had moved out of the area, leaving 11 paired scales which were scored in all areas. Thus there were 54 paired scores for all areas, but 51 for safety (table 1).

Ten health visitors, eight nursery teachers, and 10 social workers took part in the rating. The mean time taken to score was 20 minutes (range 10 to 30). All 108 scales (54 pairs) were scored in all areas of care, except safety in three (2.7%). Thus 97.3% of scales completed scoring in all areas. The raters who scored more subjects took considerably less time in subsequent subjects as they became used to scoring.

### Table 1 Status of subjects and completeness of scores

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Initial No</th>
<th>No consented</th>
<th>Scales not paired</th>
<th>One area not scored</th>
<th>No moved out</th>
<th>Final No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursery</td>
<td>55</td>
<td>55</td>
<td>12</td>
<td>3 (Safety)</td>
<td>0</td>
<td>43 (Saf 40)</td>
</tr>
<tr>
<td>Neglect</td>
<td>15</td>
<td>13</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>68</td>
<td>12</td>
<td>3</td>
<td>2</td>
<td>54 (Saf 51)</td>
</tr>
</tbody>
</table>

Saf = area of 'Safety'.

![Figure 1 Recordsheet for the graded care profile scale.](http://adc.bmj.com/)

Grades: 1 = best, 2 = adequate, 3 = inadequate, 4 = poor, 5 = worst.

(Grades in a subarea are obtained by matching the information in a case relating to that subarea with corresponding construct in the coding manual.

Example of subarea of ‘disapproval’ (area of ‘esteem’) from the manual:

Grade 1 = Consistent verbal ‘disapproval’ for any unacceptable behaviour.

Grade 2 = Consistent torso verbal disapproval or mild sanctions.

Grade 3 = Inconsistent, shouts, or moderate sanctions.

Grade 4 = Harsh inconsistent or moderate sanctions for inconvenience.

Grade 5 = Terrorise, ridicule, or severe sanctions.

(Score for an area is worked from subarea scores as described in instructions).
Table 2  Showing weighted $\kappa$ in each area of care

<table>
<thead>
<tr>
<th>Areas</th>
<th>$\kappa$</th>
<th>95% confidence interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical</td>
<td>0.899</td>
<td>0.850 to 0.948</td>
</tr>
<tr>
<td>Safety</td>
<td>0.894</td>
<td>0.854 to 0.933</td>
</tr>
<tr>
<td>Love</td>
<td>0.785</td>
<td>0.720 to 0.849</td>
</tr>
<tr>
<td>Esteem</td>
<td>0.877</td>
<td>0.808 to 0.946</td>
</tr>
</tbody>
</table>

Table 3  Comparison of complete agreement and agreement within one grade difference in percentages in the two groups of subjects

<table>
<thead>
<tr>
<th>Areas</th>
<th>% Agreement, nursery grade</th>
<th>% Agreement, neglect grade</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Complete One grade difference</td>
<td>Complete One grade difference</td>
</tr>
<tr>
<td>Physical</td>
<td>72 98*</td>
<td>73 100</td>
</tr>
<tr>
<td>Safety</td>
<td>63.50 100 64 100</td>
<td>73 100</td>
</tr>
<tr>
<td>Love</td>
<td>49    100 73 100</td>
<td>73 100</td>
</tr>
<tr>
<td>Esteem</td>
<td>77    98* 64 100</td>
<td>64 100</td>
</tr>
</tbody>
</table>

* A single case where the pair of raters disagreed by two grades in those areas.
areas. The net effect on a child of an uneven care profile will depend on the severity of deficiency in a particular area, the buffering effects of good care in other areas, and the child’s innate characteristics. Profiling (good or bad care in all areas on the same scale) provides an opportunity to analyse child outcome in this way. Profiling also helps identify in which areas care is deficient. Improvement over time can be reflected through changes in score towards the better grades.

CONCLUSION
The GCP scale for measurement of care is a new design. In this field trial it appeared workable in routine practice. It was found to be user friendly and gave a measure of care with high inter-rater agreement, showing strengths and weaknesses in four areas—physical, safety, love, and esteem. Its use in conjunction with other conventional practices in a variety of situations where care is a matter of interest provides a new reference point. With time, it may provide a better understanding of the effect of care on children, especially where care varies in different areas (uneven profile). In addition to care assessment, it can also be of use in targeting intervention and monitoring changes. It can be used by professionals working with children in different agencies such as education, social services, and health.

Field trial of graded care profile (GCP) scale: a new measure of care

O P Srivastava and L Polnay

Arch Dis Child 1997 76: 337-340
doi: 10.1136/adc.76.4.337

Updated information and services can be found at:
http://adc.bmj.com/content/76/4/337

These include:

References
This article cites 7 articles, 3 of which you can access for free at:
http://adc.bmj.com/content/76/4/337#BIBL

Email alerting service
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Topic Collections
Articles on similar topics can be found in the following collections
Clinical trials (epidemiology) (480)

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/