A case study of staff attribution, emotion and behaviour in response to a person with a severe learning disability and challenging behaviour

Dave Dagnan

CITATION
A case study of staff attribution, emotion and behaviour in response to a person with a severe learning disability and challenging behaviour

Dave Dagnan

Abstract
This paper applies Weiner's attribution model of helping behaviour to staff responses to one man with severe learning disability and challenging behaviour. These results are consistent with predictions from Weiner's model. The applications of such models to clinical formulation, and staff training and support are discussed.

Keywords
learning disabilities; challenging behaviour; case study; attribution model

Introduction
In recent years there has been an increasing interest in cognitive and emotional understanding of carers' responses to challenging behaviour. For example, attribution models have been suggested for helping behaviour (e.g., Weiner, 1980), which suggest that the interpretations of challenging behaviour and subsequent emotions exert an effect on carers' behaviour. Weiner (1980) focuses on the attribution of controllability, which is the judgement of whether the cause of a behaviour or event is under the person's control. He suggests that a carer will be more sympathetic and hence more helpful if the cause of a person's challenging behaviour is seen as outside that person's control (for example, due to their learning disability). Conversely a carer will be more angry and less helpful if the cause of a person's challenging behaviour is seen as within that person's control (for example, they are seen as 'knowing what they are doing').

There have been a number of studies of carer behaviour which have used Weiner's model (e.g., Willner & Smith, 2007; Dagnan, Trower & Smith, 1998). However, there is little research that applies this model to staff behaviour in real settings and many studies have been critiqued for using vignette methodologies. This paper reports the application of Weiner's model to the responses of care staff to one man with a severe learning disability and severe challenging behaviour. It uses daily records of incidents of challenging behaviour that include the staff's explanation of the behaviour and the feelings they experienced during the incident.

Participants
This case study concerns one man with a severe learning disability (John). He lived in a house for four people with severe challenging behaviour. John has a number of different and frequent challenging behaviours. In this paper we consider four categories:
1. Hitting and scratching others. John punches, slaps, scratches and pinches staff and co-residents.
2. Self-injury. John hits his own face and legs, or bangs his head to the wall.
3. Inappropriate urination and defecation. John urinates or defecates when not in the toilet.
4. Environmental damage. John pulls down and rips curtains, tips over plates, rips clothes.
A total of 35 residential, day and clinical staff filled out record charts following an incident of challenging behaviour during the six months covered by this paper. Of these 15 (42.9%) were women and 20 (57.1%) were men. Data were available for demographic characteristics of 28 people. The group had a mean age of 33.4 years (SD= 12.8) and had worked with people with learning disabilities for 5.2 years (SD = 5.9). The 35 carers completed a mean of 46 charts each (SD = 56.7; Range 11 - 162).

Measures
The data here are from a six month period and are taken from routinely kept Antecedent-Behaviour-Consequence charts (ABC charts; e.g., Murphy, 1987). Separate charts were kept for each type of challenging behaviour. The charts consist of several sections including: date and time of incident, environmental settings, triggers immediately before the incident, description of behaviour and the consequences of the behaviour. Additional sections asked for staff to record how they felt during the incident and what they think caused the incident.

 Procedure
The emotions, beliefs and consequent staff behaviour were taken from the records and categorised as below:

1. **Behaviours.** Each chart was used for a specified behaviour as described above.
2. **Causes** were coded according to locus of control (internal, external or mixed). Internal locus was coded if a cause described factors that lie within the person, external locus was coded if a cause described factors that lie with others or the environment. If causes described both internal and external factors this was coded as such.
3. **Emotions** were coded as stated by staff (given in brackets below) and then collapsed into five categories of anger, sadness (sad and disappointed), other negative emotion (anxious, frustrated, victimised, concerned, confused, embarrassed, stupid and resigned), 'OK' and positive emotion (relieved, surprised, amused, happy and sympathetic).
4. The **consequent staff behaviour** was coded according to the range of descriptors used by staff (given in brackets below). The categories obtained were then collapsed into four categories of no intervention with client (e.g., ignored behaviour, John stopped by himself, staff escape, other client intervened, no intervention); simple instruction or restrain (e.g., restrained, told 'no' or 'stop'); moving the client from the setting; and other intervention with client (e.g., distraction, talked to John, asked John to rectify situation, gave John attention).

Results

Reliability
For the purpose of assessing reliability 100 charts were also coded by a second graduate psychologist and percentage agreement. There was 100% agreement on John’s behaviour, the five categories of emotional response achieved 88.2% agreement, the attribution of locus of control achieved 84.2% agreement and the four categories of staff behaviour achieved 84.2% agreement.

Descriptive analysis
The analysis reported below relates to the 1333 incidents for which there is either a feeling reported, a cause reported, or both.

The behaviours
Three-hundred-and-sixty-one records (27.1%) related to hitting and scratching others, 262 (19.6%) related to self-injury, 228 (17.1%) to inappropriate urination and defecation, and 482 (36.2%) to environmental damage.

The attributions
Of the 1333 behaviours, a cause was identified in 1007 (62.2%) cases. Of the causes identified 859 (85.3%) were attributed as having an entirely internal locus of control, 35 (3.5%) as entirely external locus of control and 113 (17.0%) as a mixture of both.

The feelings
A clear emotion was identified in response to 972 (62.2%) of the 1333 behaviours. There were 150 (15.4%) incidents followed by anger, 66 (6.8%) followed by sadness, 230 (14.2%) followed by other negative emotions, 395 (40.6%) followed by feeling OK, and 131 (13.5%) followed by positive emotions.

The staff behaviour
Three-hundred-and-fifty-six (26.7%) incidents were followed by no staff intervention with John, 227 (17.0%) were followed by simple instruction or restrain, 213 (16.0%) were followed by the removal of John from the setting, 537 (40.3%) were followed by other active interventions.

Further analysis
A series of cross-tabulations were carried out to explore the relationship between the behaviour shown by John and staff descriptions of cause,
attributions, feelings and behaviour; these are presented in a series of tables. Chi-square is the most appropriate statistic to analyse these tables, however, care should be taken in interpretation as data are not fully independent. The tables show the main possible associations; i.e., John’s behaviour with staff emotion, attribution and behaviour, staff behaviour with staff emotion and attribution, and staff emotion with attribution. The tables show frequencies with percentages calculated for column labels to facilitate comparisons across the column labels.

Table 1 shows perceived causes, explanations, attributions, emotions and staff behaviour for each of the four categories of John’s behaviour. There is a significant association between John’s behaviour and perceived locus of control ($X^2 = 36.2, \text{df} = 6, n = 1007, p < 0.00001$). An internal locus of control is attributed more frequently for hitting and self-injury than for other behaviour. There is a significant association between John’s behaviour and the emotion reported ($X^2 = 243.1, \text{df} = 12, n = 972, p < 0.00001$). There is a higher percentage of anger reported for hitting and a higher percentage of sadness reported for self-injury than for the other behaviours. Finally, there is a significant association between John’s behaviour and staff behaviour ($X^2 = 379.5, \text{df} = 9, n= 1333, p < 0.00001$). There are lower percentages of no client interventions reported for self-injury and higher percentages of simple instruction and restraint for hitting others.

Table 1: Staff attributions, emotions and behaviour associated with John’s behaviour

<table>
<thead>
<tr>
<th>Locus of control</th>
<th>Hitting/scratching others</th>
<th>Self-injury</th>
<th>Inappropriate urination</th>
<th>Environmental damage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal only</td>
<td>211 (76.4)</td>
<td>177 (83.5)</td>
<td>147 (93.6)</td>
<td>324 (89.5)</td>
</tr>
<tr>
<td>External only</td>
<td>19 (6.9)</td>
<td>10 (4.7)</td>
<td></td>
<td>6 (1.7)</td>
</tr>
<tr>
<td>Mixed</td>
<td>46 (16.7)</td>
<td>25 (11.8)</td>
<td>10 (6.4)</td>
<td>32 (8.8)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emotion</th>
<th>Hitting/scratching others</th>
<th>Self-injury</th>
<th>Inappropriate urination</th>
<th>Environmental damage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angry</td>
<td>108 (37.1)</td>
<td>11 (5.9)</td>
<td>11 (6.5)</td>
<td>20 (6.1)</td>
</tr>
<tr>
<td>Sad</td>
<td>18 (6.2)</td>
<td>24 (12.8)</td>
<td>5 (3.0)</td>
<td>19 (5.8)</td>
</tr>
<tr>
<td>Other negative</td>
<td>42 (14.4)</td>
<td>56 (29.9)</td>
<td>40 (23.8)</td>
<td>92 (28.2)</td>
</tr>
<tr>
<td>OK</td>
<td>60 (20.6)</td>
<td>65 (16.5)</td>
<td>102 (60.7)</td>
<td>168 (51.5)</td>
</tr>
<tr>
<td>Positive emotion</td>
<td>63 (21.6)</td>
<td>31 (23.7)</td>
<td>10 (6.0)</td>
<td>27 (8.3)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Staff behaviour</th>
<th>Hitting/scratching others</th>
<th>Self-injury</th>
<th>Inappropriate urination</th>
<th>Environmental damage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No intervention</td>
<td>95 (26.3)</td>
<td>11 (4.2)</td>
<td>51 (22.4)</td>
<td>199 (41.3)</td>
</tr>
<tr>
<td>Reprimand/restrain</td>
<td>130 (36.0)</td>
<td>56 (21.4)</td>
<td>10 (4.4)</td>
<td>31 (6.4)</td>
</tr>
<tr>
<td>Remove the person</td>
<td>77 (21.3)</td>
<td>29 (11.1)</td>
<td>15 (6.6)</td>
<td>92 (19.1)</td>
</tr>
<tr>
<td>Other intervention</td>
<td>59 (16.3)</td>
<td>166 (63.4)</td>
<td>152 (66.6)</td>
<td>160 (33.2)</td>
</tr>
</tbody>
</table>

Table 2 shows cause, explanation, locus of control and emotion associated with staff behaviour consequent on John’s behaviour. There is no association between staff behaviour and locus of control ($X^2 = 11.5, n = 1007, \text{df} = 6, \text{ns}$). There is a significant association between staff behaviour and staff emotion ($X^2 = 88.7, \text{df} = 12, n = 972, p < 0.00001$). There is a higher proportion of anger associated with both brief response and remove from setting than for other behaviours. There is a higher proportion of sadness associated with brief response and restrain than for other behaviours. There is no significant association between staff emotion and perceived locus of control (Table 3: $X^2 = 14.7, \text{df} = 8, n = 646, \text{ns}$).
Table 2: Attributions and emotions associated with staff behaviour

<table>
<thead>
<tr>
<th>Locus of control</th>
<th>No intervention</th>
<th>Reprimand/restrain</th>
<th>Remove from setting</th>
<th>Other intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal only</td>
<td>227 (86.0)</td>
<td>138 (79.8)</td>
<td>142 (83.0)</td>
<td>352 (88.2)</td>
</tr>
<tr>
<td>External only</td>
<td>6 (2.3)</td>
<td>11 (6.4)</td>
<td>5 (2.9)</td>
<td>13 (3.3)</td>
</tr>
<tr>
<td>Mixed</td>
<td>31 (11.7)</td>
<td>24 (13.9)</td>
<td>24 (14.0)</td>
<td>34 (8.5)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emotion</th>
<th>No intervention</th>
<th>Reprimand/restrain</th>
<th>Remove from setting</th>
<th>Other intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angry</td>
<td>28 (11.1)</td>
<td>46 (24.9)</td>
<td>47 (31.1)</td>
<td>29 (7.6)</td>
</tr>
<tr>
<td>Sad</td>
<td>14 (5.5)</td>
<td>20 (10.8)</td>
<td>7 (4.6)</td>
<td>25 (6.5)</td>
</tr>
<tr>
<td>Other negative</td>
<td>64 (25.3)</td>
<td>34 (18.4)</td>
<td>33 (21.9)</td>
<td>99 (25.8)</td>
</tr>
<tr>
<td>OK</td>
<td>113 (44.7)</td>
<td>49 (26.5)</td>
<td>47 (31.1)</td>
<td>186 (43.6)</td>
</tr>
<tr>
<td>Other positive</td>
<td>34 (13.4)</td>
<td>36 (19.5)</td>
<td>17 (11.3)</td>
<td>44 (11.5)</td>
</tr>
</tbody>
</table>

Table 3: Attributions associated with staff emotional response to John’s behaviour

<table>
<thead>
<tr>
<th>Locus of control</th>
<th>Anger</th>
<th>Sadness</th>
<th>Other negative emotion</th>
<th>OK</th>
<th>Other positive emotion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal only</td>
<td>81 (77.1)</td>
<td>44 (86.3)</td>
<td>153 (89.0)</td>
<td>202 (87.8)</td>
<td>74 (84.1)</td>
</tr>
<tr>
<td>External only</td>
<td>4 (3.8)</td>
<td>2 (3.9)</td>
<td>2 (1.2)</td>
<td>7 (3.0)</td>
<td>6 (6.8)</td>
</tr>
<tr>
<td>Mixed</td>
<td>20 (19.0)</td>
<td>5 (9.8)</td>
<td>17 (9.9)</td>
<td>21 (9.1)</td>
<td>8 (9.1)</td>
</tr>
</tbody>
</table>

Discussion
This paper has presented a detailed account of staff responses to the challenging behaviour of one man with severe learning disabilities and severe challenging behaviour. The responses were recorded using ABC charts with additional information regarding the staff’s view of the cause of the behaviour and how they felt during the incident. When causes were identified 85.3% had a purely internal locus of control. The statements made often described John’s intentions or wishes and were internal and controllable. There were few uncontrollable internal causes identified (e.g., due to illness or epilepsy; both of which were relevant to John). The high rate of attributions of internal locus is similar to the high proportion of people (74%) who identified challenging behaviour as intentional found in a previous interview study (Hastings, 1995). A range of emotions were reported in this study. However, only 36.4% of emotions reported were negative (anger, sadness and other negative emotions).

Some differences in staff attribution and emotional response across behaviours were identified. Self-injury and aggression were consistently responded to differently from the other behaviours. More external causes are identified for hitting and self-injury than for inappropriate urination and environmental damage. A higher percentage of anger is reported in response to hitting and, although reported at a low level, a higher proportion of sadness was reported following self-injury. This pattern of emotional response is also reported in other papers (e.g., Bromley and Emerson, 1994). Staff also act to contain the damage to the person and environment when behaviours are aggressive or self-injurious.

Whilst the results offer some support for Weiner’s model we should be cautious in interpreting the data from a single case study. However, the study has found that the relationships suggested in attribution models do hold in this individual case. A further strength of this study approach is that reported staff behaviours in response to actual incidents of challenging behaviour have been shown to be associated with attributions and emotions. Previous studies of attribution models (e.g., Dagnan et al., 1998; Hastings, 1995) and of staff beliefs and
behaviour have tended to use measures of general
intention to help, predicted helping behaviour or
‘usual’ helping behaviour. This study relates what
reported behaviour on an incident by incident basis to
attributions and emotions. There are a range of
clinical implications for this work. For example, we
believe that staff training and support should take into
account the cognitive and emotional responses of
staff to the challenging behaviour of people with
learning disabilities (e.g., Kushlick et al., 1997). For
example, Kushlick et al (1997) have described an
approach that uses cognitive therapy approaches to
equip carers to cope with the set-backs that inevitably
occur when using non-aversive, constructional
behavioural approaches (e.g., LaVigna & Donnellan,
1986). This study has provided further support for the
development of cognitive approaches in this area.

Affiliations
Professor Dave Dagnan, Consultant Clinical
Psychologist & Clinical Director, The Learning
Network, Cumbria Partnership NHS Foundation Trust

Contact information
Dave Dagnan, dave.dagnan@cumbria.nhs.uk

References
Bromley, J., & Emerson, E. (1995). Beliefs and
emotional reactions of care staff working with people
with challenging behaviour. Journal of Intellectual
Disability Research, 39, 341-352.

responses to people with learning disabilities and
challenging behaviour: A cognitive-emotional
analysis. British Journal of Clinical Psychology, 37,
59-68.

influence staff responses to challenging behaviours:
An exploratory interview study. Mental Handicap
Research, 8, 296-320.

Applying cognitive behavioural approaches to the
carers of people with learning disabilities. In B.
Kroese, D. Dagnan, D., & K. Loumidis (Eds.)
Cognitive Therapy for People with Learning

LaVigna, G., & Donnellan, A. (1986). Alternatives to
punishment. Solving behaviour problems with non-

Murphy, G. (1987). Direct observation as an
In J. Hogg & N. V. Raynes (Eds.). Assessment in
mental handicap: A guide to assessment practices,
tests and checklists. London: Croom Helm.

Weiner, B. (1980). A cognitive (attribution)-emotion-
action model of helping behaviour: An analysis of
judgments of help-giving. Journal of Personality and
Social Psychology, 39, 186-200.

applied to helping behaviour towards people with
intellectual disabilities who challenge, Journal of
Applied Research in Intellectual Disability, 21, 150-
155.