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CARE STAFF ATTRIBUTIONS FOR VIOLENT INCIDENTS INVOLVING MALE AND FEMALE PATIENTS: A FIELD STUDY

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ABSTRACT

Objectives: This paper presents a study of naturally occurring attributions recorded by care staff following incidents of restraint in a psychiatric secure unit. The relationship between control for patient, control for staff and behavioural outcomes including use of medication, seclusion and duration of restraint were explored for male and female patients.

Design & Methods: 557 forms documenting incidents of control and restraint, and completed over a four-year period by nurses in a UK psychiatric hospital, were content analysed using the Leeds Attributional Coding System (LACS: Munton et al., 1999). Additional information concerning duration of restraint, severity of injuries sustained by patient and care staff, use of medication and seclusion, and patient was also gathered. It was hypothesised that perceived patient control over causes of the restraint incident would be associated with the duration of restraint, use of seclusion and medication. It was also predicted that male patients would be perceived as having more control over incidents and thus more likely to be secluded and less likely to be prescribed medication than female patients.

Results: Seclusion was associated with controllable attributions for patient and uncontrollable attributions for care staff. Use of medication was associated with uncontrollable attributions for patient, but only for male patients. Contrary to prediction female patients were more likely to be secluded than males and less likely to receive medication. Staff were also more likely to state that they had 'no explanation' for restraint incidents involving female patients.

Conclusions: The investigation of naturally occurring attributions raises important questions regarding the relationship between patient gender and attributional models of helping behaviour. The results are discussed in terms of their potential implications

for future research and health-care practice.

INTRODUCTION

Violence in the workplace is a significant problem. In 1997 twelve out of every 100 employees in England and Wales experienced at least one physical assault at work (Mirrlees-Black, Budd, Partridge & Mayhew, 1998). However, health care professionals appear to be at particular risk as just over 5% of those surveyed had been physically assaulted at work over the previous year (Budd, 1999). Unfortunately, this figure is likely to be much higher for nurses in psychiatric settings for whom the management of aggressive patient behaviour is a day-to-day responsibility (Torpy & Hall, 1993). Indeed, the rate of injury to care staff from patient assaults now exceeds that of construction workers: a group of employees traditionally viewed as having the most dangerous occupation (Flannery, 1996).

Given the high costs of such violence for employees, employers and patients (Whittington, 1994; Whittington & Wykes, 1994) it is not surprising that researchers have sought to identify factors most likely to contribute to the aetiology of violent incidents. Those proposed to date have included previous history of violence (Monahan, 1981), diagnostic category (Noble & Rodgers, 1989), stage of illness (Davis, 1991), patient gender (Convey, 1986), environmental factors (Whittington & Wykes, 1996), and attitudes of care staff (Durivage, 1989). However, despite growing evidence that the way in which individuals explain episodes of conflict has an important influence on how they choose to respond (e.g., Bugental, Blue, Cortez, Fleck, Kopeikin, Lewis & Lyon, 1993; Bugental, Lyon, Krantz & Cortez, 1997), relatively little attention has been paid to the role of cognitive factors in the exacerbation or successful resolution of violent incidents (Lopez & Wolkenstein, 1990). This study attempts to refocus attention upon the importance of cognitive factors by investigating naturally occurring causal attributions. These attributions were produced by care staff working in a psychiatric secure unit on record forms that were completed following incidents of patient restraint. As forms were completed for every episode of violent patient behaviour leading to the restraint of a patient over a four-year period it was possible to explore two central research questions. First, are management strategies such as use of seclusion, medication and length of restraint

associated with care staff perceptions of patient control over causes of violent episodes? Second, does patient gender influence the type of attributions that care staff make for violent incidents, and their subsequent choice of management strategy?

Attributions and helping behaviours

In a seminal piece of research, Brewin (1984) found that medical students were more willing to engage in helping behaviours and prescribe medication when they perceived patients to have little control over the events leading to their medical condition. However, when patients were perceived to have more control over such events, help was less forthcoming. Thus, the quality of medical care depended, in part, on the health-care professional's causal attributions and moral evaluation of the patient (Weiner, 1995). Since this early research several studies have used attribution theory as a framework to explore and predict clinical decisions concerning the dangerousness and treatability of patients among care staff. For example, Sharrock, Day, Qazi and Brewin (1990) presented nursing staff in a medium secure unit for mentally disordered offenders with vignettes of hypothetical negative patient behaviours. Staff were asked to imagine that each behaviour had been demonstrated by a single 'real' patient currently on the unit, and then rate it on a number of causal dimensions. They found that the more stable the cause was rated, and the more controllable by the patient, the less optimistic staff were about treatment outcomes and, consequently, the less likely they were to engage in helping behaviours.

Reid & Millard (1997) investigated attributions made by care staff for the causes of convicted patients' index offences (including murder, attempted murder, aggravated burglary, grievous bodily harm, actual bodily harm, kidnapping and indecent assault) that had led to their detention at a UK maximum security hospital. They too found that when care staff rated the cause of the index offence as stable and controllable by the patient, patients were rated as less treatable. Similarly, Dagnan, Trower & Smith (1998) found that care staff working with individuals with learning disabilities displayed more negative emotion towards patients, were less optimistic and showed less willingness to help when a patient was perceived to have control

over their challenging behaviour. More recently, Stanley & Standen (2000) asked 50 care staff to rate six hypothetical case studies of patient challenging behaviour. They found that the more outer-directed the patient behaviour (as opposed to inner-directed behaviours such as self-injury), the greater the carers' attributions of control for patient, negative affect and the less propensity to help.

Most studies in this area have focused on attributions for hypothetical patient behaviours and have explored staff attributions for patients rather than staff attributions for themselves. In a notable exception Cottle, Kuipers, Murphy and Oakes (1995) examined the causes that care staff attributed for actual incidents of violence in which they had been a victim. Care staff in a psychiatric hospital working with individuals with learning disabilities and/or mental health needs were interviewed and asked to complete a modification of the Attributional Style Questionnaire (ASQ: Peterson, Semmel, Baeyer, Abramson, Metalsky & Seligman, 1982), within one week of experiencing a violent incident, and again one month later. In total, attributions for 30 separate incidents involving 11 patients were collected. Cottle et al. found that, care staff typically made external and uncontrollable attributions for themselves following such incidents, and internal, personal and uncontrollable attributions for the patient. Interestingly, these findings contrast with those of previous research that have found that care staff typically perceive such behaviours to be <u>controllable</u> by patients. Such findings may reflect the more naturalistic context of the study and a focus on actual rather than hypothetical incidents.

<u>Limitations of previous research</u>

Such findings appear to support the view that care staff attributions can be an important determinant of how they respond to patients and, thus, the aetiology of violent episodes. However, a number of criticisms can be levelled at previous investigations. For example, most studies have relied upon the investigation of attributions produced by a small sample of staff. These have generally concerned few incidents and a small number of patients. As a consequence findings are often difficult to generalise. Furthermore, with the exception of Cottle et al. (1995), most

researchers have studied inferred behavioural responses. That is, what care staff say they would do, rather than consider how staff actually do behave towards patients. Studies have also focused on hypothetical situations or patients (e.g., Dagnan et al., 1998) rather than actual episodes and real patients. Furthermore, the most typical methodologies have used questionnaires and vignettes, rather than free-response formats, to elicit causal attributions. Although questionnaires and vignettes have a clear advantage in being able to produce quantifiable, standardised and comparable material (Hewstone, 1989), the ecological validity of these measures is open to question (Kelley & Michela, 1980). We simply do not know whether care staff would produce similar attributions spontaneously during real interactions.

Finally, despite evidence that the general public and professionals such as the police interpret violent episodes involving men and women differently (Wilczynski, 1991), researchers have neglected patient gender. For example, behaviour demonstrated by offending women is more typically explained in terms of situational factors (Carlen, 1988) or internal-uncontrollable causes such as personal pathology (Allen, 1987). Horn and Hollin (1997) also found that both police and non-police participants perceived female offenders as being less deviant or 'fundamentally bad' than male offenders. Harsh punishment was generally viewed as inappropriate for women, who were considered to be more likely to benefit from rehabilitation than men. Given such findings regarding male and female offenders, it seems likely that patient gender may also influence care staff attributions, such that male patients may be perceived as having more control over violent episodes than women.

One way in which many of the limitations of previous studies can be addressed is by analysing naturally occurring attributions produced by care staff following violent incidents and recorded as written accounts on 'restraint forms' as part of standard hospital procedures. Such restraint forms represent an ideal focus for research. Not only is there evidence that individuals are most likely to engage in attributional activity when they encounter novel, surprising and potentially threatening events (e.g., Weiner, 1995), restraint forms require care staff to explain the aetiology of violent incidents and use of management strategies. As such staff

members are expected to describe, in their own words, why the event occurred, how it was managed and record factual information such as length of restraint, use of seclusion and use of medication.

In the following study we tested a number of hypotheses derived from earlier findings (e.g., Brewin, 1984). We predicted that the management strategies used by care staff would be more 'punitive' when patients were perceived as having control over the causes of violent incidents, but strategies would be more 'help' focused when patient control was perceived to be low. More specifically, we predicted that there would be an association between more control attributed to patients by care staff and the use of seclusion (hypothesis one) and longer periods of restraint (hypothesis two). We also predicted that the prescription of medication (a help strategy) would be associated with lower levels of control for patients (hypothesis three). Finally, we predicted that care staff would make different attributions for violent episodes involving male and female patients such that: male patients would be perceived as having greater control over the causes of a restraint incident than female patients (hypothesis four); female patients would be more likely than male patients to be prescribed medication (hypothesis five), and; male patients would be more likely to be secluded than female patients (hypothesis six).

METHOD

Context and Participants

The study took place in a 65 bed medium secure psychiatric hospital, which caters for patients detained under sections of the Mental Health Act (1983). All in-patients at the hospital are formally detained because they have either committed an offence or cannot be managed as informal (voluntary) patients. At any one time the care staff-patient ratio is 1:3.5 with 60% of the nursing staff qualified as RMN (Registered Mental Nurse) or RNMH (Registered Nurse for the Mentally Handicapped). Remaining care staff are unqualified Care Support Workers whose

work is supervised by qualified staff. The first author was employed as a clinical forensic psychologist in the secure unit in which the research took place.

The use of physical restraint to manage aggressive patient behaviour is only advocated in emergency situations where there appears to be a real possibility that significant harm would occur if such an intervention were not made. Thus incidents that result in the use of physical restraint represent a proportion of all aggressive incidents occurring at the hospital. Following the UK Mental Health Act (1983) Code of Practice (Department of Health and Welsh Office, 1999) hospital policy states that restraint forms should be completed, as soon as possible after every episode of physical restraint, by the senior nurse involved. The forms allow the staff to provide their own account of the incident and to offer recommendations regarding the patient's care. Staff are required to respond to four free response questions, asking them: a) to describe the incident (e.g., "[Patient] *was called at 7.45 a.m. At approximately 8.10 he came out of his bedroom demanding a bath, staff explained that this wasn't possible because of staff numbers and patients need to go down stairs. Explained that we would provide bedroom access later in the day*."), b) whether verbal diffusion was used prior to the incident (e.g., "*On many occasions [nurse] asked [patient] not to walk towards him in a threatening manner, he [patient] was given plenty of opportunity to back off but chose not to*."), c) whether in their judgement the incident could have been avoided (e.g., "*The incident could not have been avoided as [patient] was given every opportunity to avoid assaulting staff*."), and d) whether they have any recommendations for future action (e.g., "*It is my opinion that the incident was dealt with professionally and would hope that in future cases it would be handled the same.*"). Additional information concerning the duration of restraint, use of medication, whether or not seclusion was used, and details of injuries to staff or patient, is also recorded.

Procedure

All physical restraint forms completed during a four-year period (January 1994- December 1997) were subject to a detailed content analysis. Forms were coded

for the severity of the incident in three ways: a) duration, b) use of seclusion, and c) occurrence of physical injury. The duration of physical restraint was categorised as "high" (over 20 minutes), "medium" (10-20 minutes) or "low" (less than 10 minutes), and whether or not the incident led to the use of seclusion was rated "yes" [1] or "no" [0]. Severity of injuries to those involved was categorised using a classification system developed by Fottrell (1980). Incidents were rated "1" when no physical injury was detectable or suspected; "2" when incidents resulted in minor physical injuries (e.g. bruises, abrasions, small lacerations); and "3" when major physical injury occurred (e.g. large lacerations, fractures, loss of consciousness; need for special investigations e.g. blood test, permanent physical disability or death). Incidents were coded separately for injuries to staff and patients.

Causal attributions produced on the forms were identified and coded using the Leeds Attributional Coding System (LACS: Munton, Silvester, Stratton & Hanks, 1999). In accordance with Brewin, MacCarthy, Duda and Vaughn (1991) an attribution was defined as any statement identifying a factor or factors that produced or contributed to a given outcome. A stated or inferred causal relationship had to be present that could be signalled by a recognised causal connective such as 'because'. A rating was made for the entire passage of text on the basis of frequency of controllable and uncontrollable causes. Each form was coded according to whether the staff member completing the report attributed control to him or her-self for the cause or outcome of the restraint episode [CS], and whether the staff member perceived the patient to have control [CP].

Forms were rated 'controllable-staff' [3] when the incident was attributed to a cause that the staff member might normally be expected to influence without exceptional effort (e.g., "*A review of treatment (medicine & staff approach to care) may improve the situation*"). A form was rated 'uncontrollable-staff' [1] when the causes or outcomes were such that the staff member would be unlikely to be able to influence or control them (e.g.,*"The patient's intent to achieve physical confrontation made avoidance impossible"*). Finally, a form was rated 'neither controllable nor uncontrollable-staff' [2] where there was no clear indication of controllability or

otherwise for the staff member (e.g., *"Verbally abusive to member of staff. When approached attempted to grab staff"*).

In the case of attributions for patient, a form was rated 'controllable-patient' [3] when the cause or outcome was one that the patient would normally be expected to influence without exceptional effort (e.g., "*He deliberately provoked a situation and then attempted to take the opportunity to assault others"*). Patient behaviour described as attention seeking was generally coded as controllable by the patient, and refusal of medication by a patient was also coded controllable by the patient unless there was clear evidence that the nurse believed that refusal of medication was beyond the patient's control. Forms were rated 'uncontrollable-patient' [1] when the cause or outcome was described as one that the patient would be unlikely to be able to influence or control (e.g., *"Incident a product of patient's delusional behaviour"*). For example, patient's mental state (psychotic, unsettled etc.) was typically coded as uncontrollable by the patient unless there was clear evidence that this factor was considered to be under the patient's control. Similarly, loss of temper was coded uncontrollable, in the absence of contradictory evidence. A form was rated as 'neither controllable nor uncontrollable-patient' [2] when there was no clear indication or controllability or otherwise for the patient on the form (e.g., *"Whilst on session over social club, S attempted to assault fellow patient by trying to drag him off the settee*").

Additionally, forms were coded 'no explanation' [1] when the staff member explicitly stated that he or she had no explanation for the incident (e.g., *"…there was no indication that she would attack someone – entirely unpredictable assault"*). However, despite the staff member making such a statement, in most cases attributions were still produced on the form. Hence, although a forms was coded 'no explanation' it was still possible to code controllability for staff and patient. Forms where 'no explanation' was not stated were coded [0].

The reliability of ratings was assessed by a second coder, blind to the hypotheses but experienced in attributional coding, who independently rated 100 (17.9%) forms. Inter-rater reliability for control for staff [CS] was 82% (kappa = .56)

and control for patient [CP] was 74% (kappa = .53). According to Fleiss (1971) kappa values above .4 are considered adequate and values above .7 are considered good for this type of data.

RESULTS

Between January 1994 and December 1997 a total of 557 physical restraint forms were completed by 58 care staff (N=32, 55.2% male and N=26, 44.8% female). Each form documented a separate incident of restraint and involved a total of 114 patients (N = 88, 77.2% male and N = 26, 22.8% female, age range 17-67 years, M = 31, S.D. = 10.67). 350 patients were admitted to the unit during this time (N=310, 88.6% male and N=40, 11.4% female) and 32.6% of these were subject to restraint. Comparatively more female (43%) than male (31%) patients were subject to restraint, but this difference did not achieve significance. Similarly, whilst not significant, slightly more of the restrained group were admitted under the category of 'psychopathic disorder' (9.2% non-restrained, 15.8% restrained).

Restraint episodes lasted between 1-195 minutes (M = 12 minutes, S.D. 14.45) and 58 (10%) involved the seclusion of a patient. In most incidents there were no noted physical injuries to staff (79.2%) or patients (79.6%). However, 102 incidents (18.3%) involved minor physical injuries to staff and 98 incidents (17.6%) involved minor physical injuries to patients. Major physical injuries were sustained by staff in two incidents and by patients in a further two incidents.

Statistical analysis

The naturalistic nature of this data set presents a challenge for statistical analysis. For example, some of the care staff completed more than one restraint form, similarly some patients were involved in more than one restraint episode. However, condensing the data so that each patient and each member of staff appears only once vastly reduces the number of restraint forms available for analysis (e.g., episodes of seclusion reduce from 58 to two), making it extremely difficult to test the hypotheses.

Similarly Log-linear modelling is inappropriate because too few observations were available per individual within each level, and the data has more than one tier of observations in (i.e., patients and care staff). Although Chi-square could normally be used to test for associations with categorical data, it relies on the assumption of independence of scores. This assumption overcomes the possibility that results from one or more individuals who contribute a disproportionate number of scores might be influencing the results. After seeking further advice, it was decided that a possible solution would be to explore the data set in more detail in order to determine whether individuals who either produce large numbers of restraint forms (i.e., care staff), or who are involved in large numbers of restraint episodes (i.e., patients), provide different patterns of attributions to those of the other groups. Thus, we tested the homogeneity of the data set by comparing random samples (N=10) of restraint forms selected for i) individual staff who produced 1-5, 6-10, 11-20 and 20+ restraint forms, and ii) individual patients for whom 1-5, 6-10, 11-20 and 20+ restraint forms are completed. Descriptive statistics are provided in table one which indicate that mean scores for control-self and control-patient do not appear to vary substantially across the categories. Using Kruskall Wallis Tests to test for differences for control-self and control-patient for each of the two samples found no significant differences. We have therefore treated the data set as homogenous and used Chi-square to test for associations (see Silvester, Patterson & Ferguson, 1997).

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Test of Hypotheses

We predicted that incidents described by nurses on restraint forms as controllable by patients would be more likely to result in seclusion (hypothesis one) and would last longer (hypothesis two) than when incidents were perceived as uncontrollable by patients. We also predicted that patients were more likely to be prescribed medication when they were perceived to have no control over the incident (hypothesis three). Overall, 446 (80.1%) forms were rated uncontrollable by staff, 57 (10.2%) controllable and 54 (9.7%) as neither controllable nor uncontrollable. In

terms of attributions for patients, 134 (24.1%) forms were rated uncontrollable by patient, 140 (25.1%) controllable and 283 (50.8%) neither controllable nor uncontrollable. Incidents were more likely to result in seclusion when staff rated them as controllable for the patient (χ = 9.2, df = 2, p<.01) (hypothesis one), and also when they rated them as 'neither controllable nor uncontrollable' for themselves (χ= 13.5, df = 2, p<.001). However, no significant association was found between staff attributions of control for self or patient and the duration of restraint episodes (hypothesis two). The association between control for patient and use of medication was not significant (hypothesis three), but control for self and use of medication approached significance (χ = 5, df = 2, p = .08). Use of medication was more likely when staff made uncontrollable attributions for themselves. In addition, medication was more likely to be prescribed when the period of restraint was longer (χ = 7.1, df = 2, p = .03) and when the incident did not result in seclusion (χ = 16.1, df = 2, p = .001).

In terms of gender, male and female patients were perceived to have similar levels of control over restraint incidents (XX% male, XX% female) (hypothesis four), although contrary to prediction (hypothesis five), female patients were more likely to be secluded than men (χ = 57.6, df = 1, p < .001). Similarly, gender and use of medicine also approached significance (χ = 3.4, df = 1, p=.06) with men more likely to be prescribed medication than women. Additional exploration of attributions revealed that care staff were more likely to state that they had no explanation for incidents involving female patients (χ = 34.9, df = 1, p < .001). This finding remained significant when the two most frequently restrained females were excluded from the analysis (χ = 11.6, df =1, p <.01). Moreover, when staff stated that they had no explanation for a violent incident, they were more likely to make uncontrollable attributions for themselves (χ = 11.00, df = 2, p < .01) and attributions which were 'neither controllable nor uncontrollable' by the patient (χ = 70, df =2, p < .001).

Finally, attributions made for frequently and infrequently restrained patients were compared. Two groups were created. Group A included patients who had been restrained more than 10 times (N = 9: 7 men, 2 women) and resulted in a total of 258

restraint forms Group B comprised patients who had been restrained less than 10 times (N = 105: 81 men, 24 women) and resulted in 299 forms. Findings indicate that staff made significantly more controllable attributions for themselves in incidents involving group B (infrequently restrained) than for group A (frequently restrained) (χ = 11.8, df = 2, p<.005). However, no significant association was found between the groups and level of control attributed to patients.

DISCUSSION

This study set out to investigate naturally occurring attributions made by care staff for themselves and patients on a psychiatric secure unit following incidents of restraint. The decision to study this type of attribution was based on the need to address limitations of previous research, including a reliance on hypothetical scenarios and patients, a neglect of objective behavioural data and the need to consider possible gender effects. In summary, the study found that:

1. seclusion was more likely to be used with patients when staff perceived the cause of the incident as 'neither controllable nor uncontrollable' for themselves (p<.001), and 'controllable' by the patient (p<.01) [hypothesis 1];

2. in the case of male, but not female, patients medication was more likely to be prescribed when staff perceived the incident as 'uncontrollable' by the patient (p=.03) [hypothesis 3];

3. female patients were more likely to be secluded than male patients (p<.001);

4. care staff were more likely to state that they had 'no explanation' when describing incidents involving female patients (p<.005);

5. staff perceived themselves as having more control over incidents involving infrequently restrained patients group compared with frequently restrained patients ($p<.01$).

Overall, these findings provide mixed support for the six hypotheses. As predicted, seclusion was more likely to be used in situations where staff attributed control to patients (hypothesis one). It is possible that when patients are perceived to have control over their aggression staff experience higher levels of anger and that this in turn results in more coercive management strategies (e.g., Dagnan, Trower & Smith, 1998; Fenwick, 1995; Weiner, 1995). Thus, despite seclusion being described as a 'helping strategy' designed to allow patients time to regain control of their behaviour, staff may also use it more punitively as a means of regaining a feeling of control over such incidents. Hypothesis two was not supported: longer restraint episodes were not associated with higher levels of control attributed to patients. However, partial support was found for hypothesis three such that medication was more likely to be prescribed when incidents were perceived as uncontrollable by male patients. The same was not found for female patients. Findings for male patients are similar to those of previous research (e.g., Brewin, 1984) and suggest that help-giving strategies are more likely when patients are perceived to have less control over their circumstances. The identification of a gender difference raises the intriguing possibility that different cognitive processes may operate when staff evaluate aggressive behaviour in female patients.

Somewhat surprisingly, additional findings relating to gender were contrary to prediction. For example, because offending behaviour by women is more typically attributed to external or internal-uncontrollable causes in comparison with that of men (Allen, 1987; Carlen, 1988) we predicted that male patients might be perceived to have more control over violent episodes than female patients. Consequently, male patients might also experience more instances of seclusion and less prescription of medication than female patients. In this study levels of control attributed to male and female patients for violent incidents were similar. Moreover, contrary to prediction,

female patients were more likely to be secluded and less likely to receive medication than male patients.

Such gender differences need to be explained. In reality, research investigating violent episodes involving male and female patients has produced contradictory findings. Whilst physical violence in the general population is more common in men than in women (Maden, 1993; Walmsley, 1986), there is evidence that female patients are involved in disproportionately more violent incidents than male patients (Larkin, Murtagh & Jones, 1988). The reasons for such findings are unclear. It is possible that they reflect different views of women and men held by clinicians when they assess risk of violent behaviour. For example, in a recent study of the accuracy of clinicians' predictions of violence (Lidz, Mulvey & Gardner, 1993) found that, despite being significantly better than chance at predicting violence in patients overall, clinicians were no better than chance at predicting violence in female patients. Coontz, Lidz & Mulvey (1994) also found that clinicians interviewing perpetrators of violent acts in a psychiatric emergency room assessed dangerousness significantly differently in male and female patients. When interviewing women clinicians referred less to the violent act that pre-empted admission and returned to the subject of violence less often than with men.

One explanation for the present findings may be that aggressive behaviour by female patients was less expected by care-staff. Certainly, there was a greater likelihood of care staff explicitly stating that they had 'no explanation' for incidents involving women compared with those involving men. Incidents that are unpredictable and difficult to explain have been identified as being particularly stressful (Bromley & Emerson, 1995). Consequently it may be partly a lack of explanation which staff find threatening, resulting in them adopting more assertive and controlling behaviours such as seclusion (Silvester & Chapman, 1997). Clearly there is a need to investigate these findings further. At present it appears that the traditional attributional model of helping behaviours may hold for aggressive incidents involving male patients but not for those involving female patients.

The identification of such gender differences underscores the importance of studying naturally occurring attributions in naturalistic contexts, where attributions from a large number of care staff for a wide range of patients can be investigated. However, as we have seen, the analysis of attributions recorded on restraint forms is not without its limitations and findings from this study should be treated with caution until further research can be conducted. A typical difficulty associated with field studies is also the absence of control data. No data was available for attributions made by care staff for patients when conflict did not result in physical restraint. Assuming that care-staff need to deal with aggressive behaviours from patients on a day-to-day basis, an exploration of attributions made by staff when incidents are resolved without the use of restraint could prove informative. For example, are patients more likely to be perceived as having control over their behaviour when restraint is used rather than not used? Clearly, findings from field research should inform more controlled investigations involving questionnaire and vignette methodologies with large numbers of staff and patients.

Another important question that arises from this research is whether individual differences in attributional style might influence the way in which different care-staff explain patient behaviour. There is growing evidence that individual differences in attributional style can predict an individual's level of reactivity, and subsequent behavioural response, towards difficult interpersonal situations (Bugental, Blue, Cortez, Fleck, Kopeikin, Lewis & Lyon, 1993; Bugental, Lyon, Krantz & Cortez, 1997). Yet few studies have considered the role of individual differences in attributional style as a predictor of subsequent helping behaviours. The findings from this study emphasise the importance of investigating attributions for patient behaviour in context. However, further longitudinal research is clearly needed in order to improve our understanding effective management of conflict and ultimately to improve the recruitment and training of individuals caring for challenging patients.

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Table 1: Summary statistics for samples (N=10) of restraint forms produced by/for different categories of care staff.

Number of restraint forms completed:	1-5	6-10	11-20	20+	All forms
A] By Staff:					
Staff (N)	29	14	8	5	56
Forms (N)	132	110	107	208	557
Control-Patient M (S.D.)	2.0 (.82)	2.1 (.74)	1.9 (.74)	2.1 (.74)	
Control-Staff M (S.D.)	1.5 (.82)	1.8 (.79)	1.4 (.70)	1.3 (.67)	
B] For Patients:					
Patients (N)	94	11	4	5	114
Forms (N)	201	87	59	210	556*
Control-Patient M (S.D.)	2.2 (.63)	2.4 (.52)	2.2 (.79)	2.0 (.67)	One missing!
Control-Staff M (S.D.)	1.4 (?)	1.2 (.63)	1.2 (.63)	1.3 (.67)	

Note: Means and S.D.s in each category are for 10 restraint forms completed A] by a member of staff, or B] for an individual patient, selected at random from each of the categories (e.g., 'staff who completed 1-5 restraint forms', or, 'patients for whom 6-10 forms were completed'). Higher mean scores indicate more controllable attributions.