# Emotions and Their Cognitive Precursors

## Responses to Spontaneously Identified Stressful Events among Hospital Nurses

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ACKNOWLEDGEMENTS. The authors gratefully acknowledge the contribution of Vickie Matthews and Maria Dourali for collecting the data.

COMPETING INTERESTS: None declared.

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JHP

*Journal of Health Psychology*

Los Angeles, London, New Delhi
and Singapore
www.sagepublications.com
Vol 13(4) 537–546
DOI: 10.1177/1359105308088526

## Abstract

This study used Smith and Lazarus's appraisal model to explore nurses' emotional reactions to self-identified distressing work situations. Key situations reported typically involved time or interpersonal pressure, coping with errors at work, difficulties with patients, and managerial conflict. The strongest emotions experienced were anger and frustration. Anxiety and sadness were less endorsed. Most nurses felt able to cope emotionally and problem-solve solutions to the problems they faced. The findings were generally supportive of Smith and Lazarus's theory, with the exception of the emotion of sadness. The implications of the results are discussed.

## Keywords

- *appraisals*
- *emotions*
- *nurse*
- *occupational stress*

## Introduction

MOST STUDIES of nurse stress have adopted a survey approach, examining the prevalence and work-related and social sources of distress, available support, and individual coping responses in cohorts of nurses. Such studies (see, for example, Bennett, Lowe, & Mathews, 2001; Chang, Hancock, Johnson, Daly, & Jackson, 2005; Edwards & Burnard, 2003; McVicar, 2003) have provided valuable information about the relationships between work demands, managerial support, coping responses, and emotional well-being.

The present study approaches the issue from a different stand-point. It examined how nurses' cognitive responses to specific events defined by them as being distressing within their working environment result in a number of stress-related emotions. In doing so, it draws on theory linking cognitive events to emotions, in particular the work of Lazarus and colleagues (Lazarus, 1999; Smith & Lazarus, 1993). Their research aimed to understand the cognitive origins of emotions—in particular, how cognition is involved in the generation of emotions and how cognitions differentiate between different emotions. Lazarus (1999) noted the non-specific nature of the term 'stress' and his attempts to overcome this by highlighting three types of stress response: where people feel they have suffered either a harm/loss (damage which has already occurred), threat (an expectation of harm or loss yet to occur), or challenge (an expectation that negative circumstances can be overcome). Despite this more specific approach, Lazarus (1999) believed that the stress concept alone provided little information about the adaptive process. Instead, he believed that the concept of stress should be closely allied to that of emotions (both positive and negative). Specific emotions provide information about the adaptive significance of events people label as 'stressful', and indicate their expectations of how they can cope with the situation. For example, anger indicates that the angry person evaluates the situation as one potentially changeable through assertive action (e.g. hostility). Conversely, responding with fear indicates the person perceives few options for acting on the situation and favours withdrawal through retreat. Lazarus identified emotions that arise from stressful (e.g. threatening or harmful) situations as 'stress emotions' (1999, p. 36), and emphasizes how the concepts of stress, emotions, and coping are part of the same 'conceptual unit' (1999, p. 37).

Because emotions are not a product only of the situation or person (but arise from both), cognition plays a central role in the aetiology of emotions. Appraisals are cognitions that serve to evaluate the significance of a situation for the person's goals or well-being. Lazarus and colleagues identified two broad categories of cognitive appraisals relevant to emotions. The first involves what they termed individual appraisal components. These can be subdivided into two primary and four secondary appraisal components. Primary appraisals involve consideration of an event's motivational relevance and its congruence or incongruence to the goals of the individual. For an event to be considered stressful it has to be both motivationally relevant and incongruent (i.e. it is relevant to personal goals, and operates against those goals). The specific emotion experienced is driven by the secondary appraisals of the event. Smith and Lazarus specified four types of secondary appraisals: who or what is responsible for the event (e.g. self or someone else); how well the individual believes they can cope emotionally with the event; how much the situation can be improved through problem-solving; and expectations of whether or not the situation will resolve in a positive or negative way. An example of how relatively small differences in appraisal may evoke different emotions can be found in the role of appraisals of responsibility for a particular situation. If an event is considered relevant and incongruent with one's goals, and the individual blames him or her self for the event, according to Smith and Lazarus, the resultant emotion is guilt. If the appraisals are that the situation is relevant, incongruent, and that *someone else* is to blame for the event, the resultant emotion will be anger.

Emotions have evolved to enable effective adaptation to challenging circumstances: specific emotions have a functional purpose. For example Frijda, Kuipers and ter Schure (1989) highlighted the importance of the action readiness (action tendency or impulse) associated with each of an array of emotions. As such, modelling emotions from their individual appraisal components does not fully encapsulate the central person–environment relationship that each emotion has evolved to address (Lazarus, 1999). Lazarus approached this issue from the cognitive perspective by identifying the adaptive significance of each emotion in the form of its *core relational theme*. The core relational theme is a form of heuristic which identifies the central relational meaning for the person of that situation at that time.

*Table 1.* Theoretical links between emotions, appraisals, and core relational themes

| *Emotion* | *Appraisal components* | *Core relational theme* |
|---|---|---|
| Guilt | Motivational relevance<br>Motivational congruence<br>Self-accountability | Self-blame |
| Anger | Motivational relevance<br>Motivational congruence<br>Other-accountability | Other-blame |
| Sadness | Motivational relevance<br>Motivational congruence<br>Low problem-focused coping potential<br>Low future expectancy | Irrevocable loss/helplessness |
| Anxiety | Motivational relevance<br>Motivational congruence<br>Low emotion-focused coping potential | Threat |

*Source:* Adapted from Smith and Lazarus (1993)

Identifying a relational theme for this person–situation encounter speeds information processing by synthesizing the set of appraisals relevant for appropriate responding; a complete appraisal-by-appraisal analysis of the situation becomes unnecessary (Lazarus, 1999, p. 94). Accordingly, understanding emotional responding not only requires knowing the relevant pattern of appraisals, but also the adaptive significance of the emotion for the person in that situation. As an example of the cognition of a stress emotion, the factors that contribute to the emotion of anger are an appraisal that the situation is relevant, unwanted, that someone else is responsible for the situation (appraisals), and an over-arching core relational theme that someone else is to blame for the situation.

Research applying Smith and Lazarus's model has been limited, and has focused primarily on associates of four emotions: anger; guilt; sadness; and anxiety (see Table 1). In addition, these issues have been explored using analogue studies of students or responses to hypothetical situations presented via vignettes (Bennett, Lowe, & Honey, 2003; Smith & Lazarus, 1993). This study represents the first study we are aware of which examines these issues in the context of 'real' (as opposed to hypothetical) situations within a working environment: nurses working in two university hospitals.

### *Aims of the study*

The present study had a number of aims. First, to identify the type of situations nurses spontaneously identified as distressing from within their working environment; second, to examine their emotional response to these situations; and third, to examine the relationship between appraisals, core relational themes, and emotions associated with these situations. Smith and Lazarus identified models of the theoretical linkages between appraisals, core relational themes, and the emotions of anger, guilt, sadness, and anxiety. Accordingly, we tested the predicted models of these emotions, with the hypothesized linkages set out in Table 1.

## Method

### *Procedure*

A survey was conducted in two British city centre teaching hospitals within an acute NHS Trust. The study was given ethical approval by the Local Research Ethics Committee. Potential participants were identified from nursing staff lists within the hospitals, with individuals selected using systematic sampling techniques (Moser & Kalton, 1971), by taking every 10th name on the lists.

Those selected were sent a questionnaire in the internal post with an accompanying letter, asking them to take part in a survey of the stress, job satisfaction, and support they experienced within their working environment. They were asked to send their completed questionnaire back to the researcher in a pre-addressed envelope. Participants were told that their anonymity would be preserved, and this was accomplished by the use of numbered questionnaires and a deliberate decision not to keep a

copy of a number–name code breaking sheet. Three weeks later, a reminder and second questionnaire were sent out to all potential participants. This asked all those who had not completed and returned the initial questionnaire to complete the second one, and thanked those who had already done so.

### Participants

Of the 340 study nurses contacted and sent a questionnaire, 113 responded. A further 12 questionnaires were returned uncompleted as the individual to whom it had been sent no longer worked in the Trust. It is not possible to know if others had not received the questionnaire. However, these data suggest a minimum response rate of 34 per cent. The final sample included five males (mean age 37 years, SD = 8.9), 107 females (mean age 37.9 years, SD = 9.8) and one participant who did not report their gender. To maintain maximum homogeneity in the sample, the decision was taken to restrict all subsequent analyses to the 107 female respondents. Data on nurse grade were available for 84 per cent of these individuals: 14 (15%) were untrained nurses (grades A and B), 13 (14%) were newly qualified (grade D), 31 (34%) were experienced staff nurses (grade E), 18 (20%) were junior ward managers (grade F), nine (10%) were ward managers (grade G), and five (6%) were senior nurse managers (grade H).

## Measures

### Distressing situation

Participants were asked to write a brief description of the most stressful work-related incident that had happened to them in the preceding month. They then wrote a brief description of the most distressing aspect of the situation they had just detailed. The measures of appraisals, emotions and coping followed these items, and addressed this most distressing aspect of the situation.

### Appraisal components, core relational themes, and associated emotions

*Appraisal components* Appraisal components were measured using an 11-item questionnaire based on that of Smith and Lazarus (1993) and validated in a UK sample by Bennett et al. (2003). Each item used a nine-point response scale. The following appraisal components were assessed: motivational relevance (two items: Chronbach's $\alpha = .54$), motivational congruence (two items: Chronbach's $\alpha = .47$), self-accountability (one item), other-accountability (one item), problem-focused coping potential (two items: Chronbach's $\alpha = .68$), emotional-focused coping potential (two items: Chronbach's $\alpha = .53$), and future expectancy (one item). Examples of each measure are as follows: motivational relevance included the item, 'How important was this situation to you?'; motivational congruence incorporated the item, 'To what extent were there negative aspects to the situation—things you didn't want or were unhappy about?' (reverse scored); other-accountability involved the item, 'To what extent did you consider someone or something else responsible for the situation?'; self-accountability involved, 'To what extent did you consider yourself to be responsible for the situation?'; problem-focused coping potential incorporated the item, 'At the time, how certain were you that you would be able to do something to make (or keep) the situation how you wanted it to be?'; emotion-focused coping potential included, 'How certain were you that you would be able to deal emotionally with what was happening?'; finally, future expectancy involved, 'How did you expect this situation to change in the future?' The total scores for each item were divided by two, where appropriate, to give a potential score for these variables of 0–9.

*Core relational themes* As in Smith and Lazarus (1993), these were measured using single scales—one for each of nine core relational themes—through which participants responded to clusters of between three and four sentences, each with a common theme. Participants were asked to rate the extent to which each cluster characterized their thoughts about the situation at the time it occurred on a single scale of 1 to 9 ('Did not characterize my thoughts at all'—'Characterized my thoughts extremely well'). An additional rating of 'not relevant' was available by scoring 0 on each scale. The following nine core relational themes were assessed: other-blame; threat; confusion; helplessness/hopelessness; optimism; unexpected; effortful optimism; self-blame; and regret. As an example, other-blame (the core relational theme for anger) was assessed with the following cluster of statements 'I've been dealt with shabbily', 'I've been cheated or wronged', 'Someone else is to blame for this bad situation', and 'I've been mistreated'.

*Emotions* Participants indicated how well each of a series of adjective clusters, each denoting one emotion, characterized their emotions at the

*Table 2.* Mean appraisal, emotion, and core relational theme scores

| | *Mean* | *SD* | | *Mean* | *SD* |
|---|---|---|---|---|---|
| Appraisals s (0–9 scale) | | | Core rel. themes (0–9 scale) | | |
| Motivational relevance | 7.71 | 1.35 | Effortful optimism/challenge | 5.50 | 2.35 |
| Motivational congruence | 3.32 | 2.01 | Optimism/hope | 4.40 | 2.71 |
| Emotion-focused potential | 5.88 | 2.05 | Helpless/hopeless | 3.37 | 2.76 |
| Other accountability | 5.77 | 2.98 | Threat | 3.20 | 2.57 |
| Self-accountability | 3.21 | 2.85 | Other-blame | 2.88 | 3.05 |
| Future expectancy | 4.91 | 2.37 | Self-blame | 1.13 | 1.50 |
| Problem-focused potential | 4.64 | 2.21 | Confusion | 3.83 | 3.03 |
| | | | Unexpected | 3.77 | 2.95 |
| Emotions (1–9 scale) | | | Theme for regret | 1.94 | 2.34 |
| Frustration | 6.31 | 2.66 | | | |
| Anger | 5.24 | 3.05 | | | |
| Anxiety | 4.36 | 2.99 | | | |
| Sadness | 3.80 | 3.17 | | | |
| Guilt | 1.38 | 2.10 | | | |

time of the event: again, using the measure developed by Smith and Lazarus (1993). For example, anger incorporated 'angry', 'annoyed', and 'resentful', whereas anxiety comprised 'nervous', 'anxious', and 'tense'. Participants assigned a single score between 1 and 9 ('Did not characterize my feelings at all'—'Characterized my feelings extremely well') indicating the extent to which each cluster characterized their emotional response to the identified situation. An additional rating of 'not relevant' was available by scoring 0 on each scale. Five stress-related emotional states were tapped by the clusters: frustration; guilt; anger; sadness; and anxiety.

## Results

### *Situations identified as distressing*

Thematic analysis was used to identify key themes within the spontaneously generated sources of distress. These were identified by one member of the research team and validated by a second. This process identified a number of consistent themes: (1) time pressure at work (e.g. 'going home thinking "if only" 'I wish I had more time' knowing that if you had a team … standards would be a lot higher'); (2) conflicting work and home demands ('Being on call ... over the weekends ... you are on call from 5pm Friday [to] 9am on Monday. You are at home trying to unwind from the week: your family suffers and I get to feel very stressed'); (3) difficulties with patients in terms of clinical (e.g. 'baby was not responding to treatment given to him') and interpersonal issues (e.g. 'trying to deal politely with an extremely confrontational patient'); (4) conflict with other health professionals (e.g. 'a ward round with a very aggressive, rude … consultant'); and (5) coping with mistakes at work made either by self or others ( e.g. 'accident involving patient trying to get into an ambulance … patient left unit with added problem'). Note that these situations reflect a 'snapshot' of circumstances that may or may not have been chronic in nature. Lazarus and colleagues (Folkman & Lazarus, 1985; Lazarus, 1991) regard stressful (loss, threat, challenge) situations as processes, and not as static events. As such, the situations identified by participants may represent the stress process at that point in its evolution; the chronicity (or otherwise) of identified situations was not deemed central to the conceptual basis of this study.

### *Cognitive and emotional responses*

Numerical analysis was conducted using SPSS version 13. Table 2 shows the means and standard deviations for the study variables. To enable comparisons between appraisal components, scale scores have been pro-rated, where necessary, to reflect a nine-point scale. Frustration, anger, and anxiety were the strongest reported emotions: sadness and guilt were the weakest. Of the appraisal components, motivational relevance was the most strongly endorsed. Results also indicated relatively high levels of emotion-focused coping potential, as well as a tendency to consider the distressing situations individuals were

*Table 3.* Correlations between emotion, appraisal, and core relation theme scores

| | *Frustration* | *Guilt* | *Anger* | *Sadness* | *Anxiety* |
|---|---|---|---|---|---|
| *Appraisals* | | | | | |
| Motivational relevance | −.012 | .11 | .15 | .20* | .22* |
| Motivational congruence | −.38** | .17 | −.16 | .04 | −.05 |
| Self-accountability | −.06 | .28** | −.05 | .07 | .00 |
| Other-accountability | .20* | .14 | .28** | −.19 | −.12 |
| Future expectancy | −.27** | .10 | −.23* | −.17 | −.02 |
| Problem-focused potential | −.25** | .11 | −.27** | −.17 | −.10 |
| Emotion-focused potential | −.10 | −.04 | −.35*** | −.29** | −.36*** |
| *Core relational themes* | | | | | |
| Other blame | .26** | .05 | .51*** | .07 | .07 |
| Threat | .05 | .13 | .14 | .18 | .44*** |
| Helpless/hopeless | .34** | −.06 | .34*** | .22* | .15 |
| Effortful optimism | −.05 | .03 | −.12 | −.08 | .22* |
| Confusion | .31** | −.02 | .30** | .25** | .21* |
| Self-blame | −.02 | .42** | .11 | .07 | .17 |
| Theme for regret | −.04 | .27** | .10 | .01 | .20* |
| Unexpected | .16 | −.01 | .22* | .18 | .17 |

*$p < .05$; **$p < .01$; ***$p < .001$

dealing with to be the fault of either other people or environmental factors (i.e. other-accountability). As expected, motivational congruence achieved a relatively low score (confirming participants were indeed focusing on an undesirable situation as requested). Self-accountability (i.e. a tendency to self-attribute blame for the distress they were encountering) had the lowest score.

Associations between appraisal components, core relational themes, emotions, and coping were assessed using two sets of analyses. First, bivariate associations were examined using Pearson's correlations. Second, the unique contribution of appraisal components and core relational themes to emotions were explored using multiple regressions.

Table 3 shows correlations between emotions and both appraisal components and core relational themes. The expected associations between emotions and secondary appraisal components were generally found. Guilt and anger were associated with self- and other-accountability respectively, and anxiety was associated with low emotion-focused coping potential. Only sadness failed to follow expected patterns of association. Against expectation, motivational relevance, and motivational congruence were inconsistently associated with emotions.

As expected, correlations showed each emotion to be most strongly correlated with its associated core relational theme (see Table 2), although none of the hypothesized core relational themes was uniquely associated with any emotion. Coefficients are displayed in Table 3.

To explore the unique contribution of appraisal components and core relational themes to emotions, a series of hierarchical multiple regression analyses were conducted. In each case the dependent variable was the emotion of interest and the independent variables were the appraisal components and relevant core relational theme. Each of the emotion scale scores were correlated to a degree with the others, suggesting some degree of overlap between the constructs being measured. Accordingly, the first step of the regression analysis involved regressing the emotions not being modelled[1] against the emotion of theoretical interest. The resulting residual formed a relatively 'pure' measure of the emotion being studied and formed the dependent variable for the next steps of the regression. Entry of further independent variables was guided by theoretical issues. All the primary and secondary appraisal components were entered together in the second regression step. All the core relational themes were entered in the third step since these are hypothesized to be better at capturing the overall relational meaning of an emotion than combinations of appraisal components (Smith & Lazarus, 1993). In this way, the added conceptual value of the emotion's core relational theme over appraisal components could be directly assessed.

*Table 4.* Beta values following hierarchical multiple regression of appraisals, core relational themes on each measure emotion as the dependent variables

| | *Guilt* | *Anger* | *Sadness* | *Anxiety* |
|---|---|---|---|---|
| *Step 1: Emotions* | | | | |
| Anger | .166 | | .085 | .000 |
| Anxiety | .115 | .000 | .209 | |
| Guilt | | .092 | .047 | .114 |
| Sadness | .050 | .050 | | .221 |
| Frustration | .033 | .655*** | .181 | −.086 |
| Adjusted $R^2$ | .021 | .455 | .077 | .25 |
| (*F* value) | (1.551) | (22.531***) | (3.155*) | (1.660) |
| *Step 2: Appraisals* | | | | |
| Motive. Relevance | .086 | .037 | .133 | .137 |
| Motive. Congruence | .124 | .081 | .162 | −.160 |
| Self-account | .291** | .085 | .051 | −.086 |
| Other-account | .143 | .233* | −.255** | −.105 |
| Future expect | −.007 | −.07 | −.114 | .211 |
| Prob-foc. pot. | .082 | −.067 | −.092 | .000 |
| Emot-foc. pot. | .087 | −.288* | −.072 | −.335** |
| Additional adjusted $R^2$ | .100 | .089 | .087 | .099 |
| (*F* value) | (2.596*) | (2.397*) | (2.362*) | (2.564*) |
| *Step 3: Core relational themes* | | | | |
| Other blame | −.062 | .336** | −.110 | −.043 |
| Threat | .109 | −.133 | −.035 | .273* |
| Helpless/hopeless | −.141 | .015 | .117 | −.080 |
| Effortful optimism/challenge | −.052 | .171 | .182 | −.185 |
| Optimism/hope | .036 | −.048 | −.123 | −.331** |
| Confusion | −.068 | −.036 | .119 | .060 |
| Self-blame | .344** | .012 | .053 | −.141 |
| Theme for regret | −.018 | .114 | −.079 | .181 |
| Additional adjusted $R^2$ | .062 | .081 | .000 | .133 |
| (*F* value) | (1.720) | (1.961*) | (.696) | (2.675**) |

*$p < .05$; **$p < .01$; ***$p < .001$

This analysis also allowed us to assess not just whether the predicted appraisals and core related themes entered the regression model, but whether any non-predicted cognitions also entered the model, providing a test of the exclusiveness of the hypothesized appraisals/core relational themes for each emotion.

Overall, appraisal components contributed significantly to the variance explained in each emotion. The theoretically expected secondary appraisal components emerged for the model of guilt (self-accountability), anger (other-accountability), and anxiety (emotion-focused coping potential). The modelling of sadness, which was associated with the appraisal of other-accountability and not the predicted appraisals, was less successful. The theoretically expected core relational themes were found for guilt and anger, as well as anxiety, although a second core relational theme of low optimism or hope was also associated with anxiety. The measure of sadness was not significantly associated with any core relational theme. The final regression model for each emotion except sadness was found to be significant, each explaining a modest but significant percentage of the variance in each measure of emotion.

## Discussion

This article reported on two issues: the spontaneously reported sources of distress within nurses' working environment, and the cognitive factors and emotions associated with these events. Although nurses were not asked to identify the

degree of distress associated with their role per se, they did spontaneously report a number of key areas of distress including time conflict at work and between work and home, difficulties with patients (both in terms of clinical issues and interpersonal conflict involving aggressive patients and relatives), conflict with other professions and their own management, conflictual peer relationships and coping with mistakes at work (either by self or others). These data are consistent with other findings based on psychometric and survey methodologies, which have found factors associated with nurse stress typically involving high work demands, lack of control and flexibility in work, unpredictable staffing and scheduling, lack of role clarity, and poor managerial support (McVicar 2003; Moos, Schaefer, & Moos, 2007; Williams, Michie, & Pattani, 1998). Patient concerns and issues have also been identified as key stressors (Burnard, Edwards, Fothergill, Hannigan, & Coyle, 2000).

The emotional responses to the distressing situations that nurses described highlighted frustration and anger as being the most strongly reported emotions in response to these personally salient (i.e. self-defined) situations. The emotions usually modelled in stress research, anxiety and sadness/depression, while clearly relevant to these situations were less endorsed, as was guilt, which was the least endorsed emotion—although still relevant to a number of situations. These data suggest that the almost exclusive focus on anxiety, depression, and burnout in studies of nurses may have resulted in the exclusion of important negative emotional states associated with the occupation.

Overall, the findings indicated that secondary appraisals were related to the emotions studied and that core relational themes added further to the explanation of the experienced emotions. Appraisal results confirmed that the situations reported by participants were both motivationally meaningful and undesirable (i.e. high motivational relevance and low motivational congruence scores). In general, nurses reported feeling able to cope well with the emotional demands of the stressors they were facing and to be able to problem-solve around the situation. They also considered most of the situations reported as largely resulting from the actions of other people or the nature of the situation they were facing. This may reflect the nature of the situation experienced or, possibly, an attributional style through which environmental factors are perceived to exert more influence over outcomes than personal agency (e.g. Rotter, 1975; Seligman, 1975). Although it is not clear from this particular study, defensive attributions are a frequently reported phenomenon in response to a variety of threatening situations (e.g. Gyekye & Salminen, 2006), and could reasonably be expected to occur within the context of the situations described by the study participants as a form of self-defence (e.g. Trafimow, Armendariz, & Madson, 2004).

Two main points emerge when examining associations between appraisal components and core relational themes with emotions. First, associations between secondary appraisal components and emotions generally confirmed expectations: self-accountability was associated with guilt, other-accountability with anger, and pessimistic emotion-focused coping potential with anxiety. The lack of association between primary appraisals and emotions was disappointing, but has proven a consistent finding in research in which participants report their cognitive responses to clearly negative situations (Bennett et al., 2003; Smith & Lazarus, 1993), probably because the variance in primary appraisals is so limited in response to a clearly, in this case self-defined, distressing situation. The theoretically expected core relational themes for guilt, anger, and anxiety contributed significantly to the regression equations. Although the variance in each emotion score explained by the regression analyses was modest, the analysis used was particularly conservative and suggests that while much of the variance in emotional scores remains unexplored, the appraisals and core relational themes identified by Smith and Lazarus do contribute significantly to the emotions experienced and reported. As such, these data add to the findings of Bennett et al. (2003) and Smith and Lazarus (1993) who found similar findings in studies of students relating to self-report situations and vignettes. As with the present study, both studies also failed to find evidence of an association with the hypothesized cognitive content and sadness. One explanation for this finding was afforded by Smith and Lazarus (1993), who speculated that the label ‘sadness’ in English differs from other emotions in that it is used as a broad descriptor for generalized negative mood or a catch-all for several negative emotions.

In conclusion, the current study examined associations between cognitive processes and emotions in response to spontaneously reported negative situations in a sample of hospital nurses. A number of key findings emerged: first, most of the situations

reported stemmed from social or interpersonal factors; second, the emotions of frustration and anger were the two most strongly reported emotions, although anxiety and sadness were also frequently experienced at the time of the situation identified by the participants. Third, the cognitions reported indicated that nurses generally felt able to cope well with the situation they faced. They reported high levels of belief in their ability to cope both emotionally and in terms of problem resolution. It is recognized that self-reports after the event may constitute post-hoc reconstructions rather than events occurring at the time. However, Scherer (1999) highlights that measures evaluating conceptual components of emotion likely prompt recognition memory such that subsequent self-reports are likely to be fairly accurate. Accordingly, we can cautiously conclude that the cognitions thought to be associated with each of the emotions studies generally fitted the models proposed by Smith and Lazarus, with the exception of sadness, which was poorly modelled. Additionally, the cognitions measured were associated with a reasonable degree of the variance in each emotion. Together, these findings indicate that future research may benefit from consideration of the traditional emotions associated with stress (i.e. threatening, harmful, or challenging) situations and also a wider set of negative (and perhaps positive) emotions. The degree to which the various emotions were experienced, and their cognitive antecedents, suggested that they could be considered normal emotional reactions to everyday hassles, and did not reflect levels of pathology or inappropriate emotional responding. Nevertheless, chronic, repeated, negative emotional responses to frequently occurring daily hassles contribute to high levels of long-term distress (Serido, Almeida, & Wethington, 2004), health-damaging behaviours (Guthrie, Young, Boyd, & Kintner, 2001), and appear to be as closely, if not more, related to ill-health and psychophysiological disorders than the larger more pathological responses to infrequent negative life events (Stuart & Garrison, 2002; Twisk, Snel, Kemper, & van Mechelen, 1999). Accordingly, these responses form an important subject of study, both in this and future studies.

## Note

1. Including frustration as this was the emotion scale most strongly associated with each of the other emotion scores and contains conceptual elements close to anger.

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