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Stress and the intensive care patient:
perceptions of patients and nurses

Marc A. Cornock BA(Hons) BSc RGN ITU Cert FAETC

Senior Lecturer in Nursing, University of the West of England, Bristol,
England

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Stress and the intensive care patients: perceptions of patients and nurses
This study was a replication of an earlier Cochran & Ganong study that investigated the perception of nurses and patients regarding the stressors faced by patients in the intensive care unit environment. As the original study was American in origin, one of the aims of the present study was to discover if the results would be replicated in a United Kingdom (UK) intensive care unit. Data collection was by the use of an environmental stress questionnaire that was an adaptation of the original data collection tool modified for use in a UK intensive care unit. The study was undertaken in two intensive care units producing a sample size of 71 patients and 71 nurses. There appears to be a wide variation in the perception of nurses and patients regarding the stress faced by patients in the intensive care unit. Similarities were noted between subject groups as to the nature of the stressors, although nurses tended to rate items over which they believed they had control as being more stressful than did the patients. Patients tended to rate items related to their illness and physical comfort as being most stressful. The results are in keeping with those from the Cochran & Ganong study.

Keywords: stress, stressors, ICU, perceptions

jected. The main focus of this article is what constitutes a stressor for the ICU patient.

INTRODUCTION

This article is concerned with the psychological needs of patients in the intensive care unit (ICU).

LITERATURE REVIEW

Many studies have noted the stressful nature of ICU for patients, but have failed to identify what constitutes a stressor. Can As a previous

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study by Cochran & Ganong (1989) had nurses working in ICUs perceive the psychological needs already investigated the perception of both patients and of their patients? It is this author's contention that if a nurses regarding stressors in American ICUs, it was nurse cannot perceive a patient need they cannot meet it, decided to replicate their study within the United and thus are unable to provide the care that patients Kingdom (UK). It was anticipated that this research study require. To assess whether the patient's needs are being would result in similar findings to the American study: met one has to ask the patient. Thus this article examines that nurses would over-emphasize the effect that environ the perception of both the patient and the nurse regarding mental stressors have on patients in ICUs, compared to the the environmental stressors to which the patient is sub-patients' own perceptions of the stressors. It has often been said that the ICU is a stressful place in which to work. There are a number of studies that have Correspondence: Marc A. Cornock, Ground Floor Flat, Elmhurst, Church attempted to demonstrate just how stressful an environ- Road, Ridgeway, Bristol BS12 2SQ ment it is (Foxall et al. 1990, White & Tonkin 1991). 518 © 1998 Blackwell Science Ltd

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It could be argued that if working in an ICU environment is adequately identified by both parties, the patients' needs stressful for nurses, and hospitalization is a stressful event and the resolution of their stress cannot be met. for the patient, as Connelly (1992 p. 335) suggests when discussing 'the stressful time of hospitalization', then surely the ICU must prove to be stressful for the patient nursed there. Bergbom-Enberg & Haljamae 1989 p. 1068

RESEARCH DESIGN

The research presented is a replication of an earlier study concluded that by Cochran & Ganong (1989), with minor modifications. Replication is a valid approach to research as it provides even as long as four years after respirator treatment, most patients an opportunity to uphold the basic requirement of all (90%) who remembered their treatment still recall the situation research: that research should be reproducible. As most as unpleasant and stress-evoking research deals with data that is taken to represent a whole

The environmental stressors that have been reported in population, any generalizations based upon the data are the literature as affecting ICU patients, centre around the taken to be representative of the whole population and not physical or psychological comfort of the patient, staff inter-just of the sample investigated. By replicating research action with

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the patient, the physical environment of the studies, the generalizations and theories derived from the ICU, family, the illness itself, and fear of death (Cochran data and sample group can be tested to ascertain whether & Ganong 1989, Chen 1990). Other contributors to the they are truly representative of the whole population or stress of the ICU are the inability to communicate, the are a reflection of the particular sample or methodology drugs used in the ICU to sedate and paralyse patients, that was used. The more that a research study is replicated, the procedures performed and the equipment used. the more convincing are the theories generated. Presly MacKellaig (1987 p. 176) quotes Fisher as saying (1991 p. 40) shares the opinion that a patient in an ITU confronts a more intensive barrage of stressors Each replication under the same conditions further establishes than a non patient, and is less emotionally resilient and thus less the reliability of previous results able to adapt to these stressors. The potential result of this may be the manifestation of the ITU syndrome.

SAMPLE

The ICU syndrome is a psychological disturbance that results from either sensory overload, or from sensory Two ICUs were invited to participate in this study and, deprivation. Sensory overload is defined as a state where after ethical approval was obtained, both agreed. Unit A the individual is exposed to many sensory stimuli to such consisted of a 4-bedded intensive care unit with patient an extent that they no longer feel in control of their admissions of #225 per year. Thirty-one qualified nurses environment. Whereas, sensory deprivation is charac-were employed on the unit during the time of the study terized by a lack of meaningful stimuli for the individual. Unit B was a 9-bedded ICU that has a nursing staff of .

It may be said to be 'precipitated by factors such as physi-40. There were a variety of grades of staff employed, from cal illness, medications, pain and emotional stress' (Fisk post-basic students through to sisters, although all staff 1991 p.456): all stressors that are relevant to the ICU were qualified. Patient admission to this unit is in the patient. Cochran & Ganong (1989 p. 1039) believe the ICU region of 700 per year, all of whom are ventilated. Both syndrome to be a 'phenomenon of altered mental function units were situated within general teaching hospitals. which occurs in some patients in ICU and resolves after The patient sample was drawn from the same two ICUs transfer from ICU'. They state that there is disagreement as the nurse sample. Criteria for inclusion into the study regarding what are the most significant stressors for the were that the patient had been ventilated on the ICU and ICU patient and

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thus, the ICU syndrome. was able to understand English. The same exclusions were Previous studies that have attempted to investigate what used as the Cochran & Ganong study (1989 p. 1039), the stressors for the patient are, have attempted to do so namely: if the patient had gross neurological deficits, or a by comparing different hospital areas, e.g. hospice, medi-history of psychotic episodes. cal and surgical areas. Also, studies have been performed It was thought, by this author, that the patient with that take into account the views of either the patient or neurological deficits or a history of psychotic episodes the nurse. According to Cochran & Ganong (1989 p. 1039), would have an altered perception of stress and the stresprior to their study no studies had been performed that sors affecting them and would therefore not be representa addressed the nurses' perception of stressors in an ICU tive of the general population of ICUs. Although the nonenvironment together with the patients' perception. Once English speaking patient would have stressors that were the stressors have been identified by both patient and related to this fact, which would only affect those that nurse, it is possible for the nurse to counteract the stressors could not speak English and therefore not be general affecting patients by manipulation of the environment and stressors, it was not possible for the researcher to include the delivery of care. However, if the stressors are not them in this study because of translation difficulties.

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Table 1 Age distribution of subjects within their groupings

Data collection

The data collection tool used was a modified version of Age range Mean range

'The ICU Environmental Stressor Score' (ICUESS) used by Cochran & Ganong (1989 p. 1040). This is a 42-item Likert-Patients 18–84 59 type scale questionnaire based upon previous tools devel-Nurses 21–40 30 oped by Ballard & Nastasy (Cochran & Ganong 1989 p. 1039). The questionnaire was modified to include an additional eight items that the nurses in the Cochran & Ganong study felt should be included, and was now Table 2 Grade and number of staff termed The Environmental Stressor Questionnaire—ESQ.

In this study the scale used is 4='extremely stressful' to Grade Number 1='not stressful' with an option of 0='not applicable', thus making a range of 0–200 total score. All participants Senior sister or equivalent 2 received similar questionnaires, although the demographic Sister/charge nurse 11 data sheets used were different for patients and

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staff, and Staff nurse 54 Post-basic student 4 the information sheets they were given reflected this. As Total number of nurses 71 with the original data collection tool (ICUESS) part of the ESQ asks the respondent to list the three most stressful items together with any items that they think should be included in the questionnaire, along with any comments they would like to add. All questions included in the The following is a summary of the demographic ESQ arose out of the available literature on stress and information collected.

hospitalization on patients (see Appendix 1 for the full ESQ). Age distribution Permission was obtained from the original authors to replicate their study and to use their data collection tool. Table 1 represents the age distribution of the subjects.

A pilot study was performed in order to ascertain the effect-according to their groups. It is interesting to note that the timeliness of the written instructions. After feedback the mean age of the patients is almost twice that of the nurses. wording of several of the questions were changed to reflect This may suggest that differences in the scoring between the comments of the pilot sample, mainly that of changing the two groups is attributable to age some of the items on the ESQ from American to English.

The procedure for data collection was a replication of Grade of staff Cochran & Ganong's (1989 p. 1040). Thus patients were contacted 2 days after ICU discharge, had the purpose of As may be expected, the largest grouping of staff is that of the study explained to them, were asked for verbal consent staff nurses, with sisters/charge nurses being the second and, upon agreement, were given a copy of ESQ to complete together with an instruction sheet. Demographic data was obtained from the patients' notes with their consent. Environmental Stressor Questionnaire data Nurses were given written instructions and a copy of ESQ plus a demographic questionnaire. They were asked to Data analysis was undertaken on the ESQ using various complete the ESQ as they believed a patient who had been statistical tests. Although the differences between the two ventilated would. Informed consent was obtained from all groups is visually evident when comparing the tables, the the subjects included in the study. differences are not statistically significant, therefore descriptive statistics will be used to present the data from the ESQs.

RESULTS

There was a 100% response rate at each ICU, resulting in ESQ scoring a total sample of 71 nurses participating, 31 from unit A and 40 from unit B. The sample was by necessity as discussed earlier, the ESQ was

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completed using a convenience sample. Likert-type scale. An overall score was calculated by sum-A convenience sample of the first 71 patients who met mation of an individual's responses (0–4) for the 50 questhe study criteria were included in the study. The sample tions. The highest total score possible on the ESQ was 200, was drawn from the two ICU's in proportion to the nurse and the lowest 0. The mean scores and range of scores for sample. the patient and nurse groups are given in Table 3. 520 © 1998 Blackwell Science Ltd, Journal of Advanced Nursing, 27, 518–527 Stress and the intensive care patient

Table 3 ESQ scores by subject group what stress actually means or entails. This may have affected the results as individuals mark items as more or less Subject group Mean score Score range stressful than others based upon their interpretation of what stress means.

Patients 67 56–95 Due to the constraints on the researcher a convenience Nurses 148 120–187 sample was used, this could have had an effect on the results.

Most stressful items

DISCUSSION

By adding all the individual scores for each item on the The most striking result of the scoring of the ESQs is the ESQ it was possible to find the most stressful items on the disparity between the subject groups on the mean and ESQ for each sample group. Table 4 summarizes this infor-range of scores (Table 3). Whilst all the patients scored the mation (see Appendix 1 for a description of all the ESQ ESQ as under 100, the lowest nurse score was 120. This items). is almost twice the patient mean score of 67. From this All subjects were asked to choose three items out of the result alone it would seem that there is a wide gulf between

50 on the ESQ that they considered the most stressful. the perceptions of the patients and the nurses as to the

Table 5 lists the items that occurred most frequently by stressfulness of the ICU environment, with the nurses overrank order of patients' responses. The nurses' responses emphasizing the stressful nature of the ICU. Looking at the are also provided for comparison. score ranges for the sample groups, the nurses scored the ESQ as twice as stressful as the patients did on both the lower and upper boundary of the score range (120 vs. 56 Most frequent score and 187 vs. 95, respectively).

By use of a Likert-type scale for the responses to each of In part this can be explained by reference to Diagram 1 the items it was possible to define the most common that pictorially presents the most frequently chosen response for each of the sample groups. This information response for each of the sample groups. The information is described in

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Figure 1. shows that whilst the patients score items as mainly 1 or 2, the nurses score them as 3 or 4. Thus, the nurses consistently score each item as two categories higher than the patients. For every 'not stressful' or 'mildly stressful' that The patients in this study were asked to participate after the patient scored an item, the nurses were more likely to they had been discharged from the ICU. This occurred score it as 'very stressful' or 'extremely stressful', within 2 days of leaving the ICU. It is possible that the respectively. patient did not pay too much attention to their environ-Both groups scored items as 'non-applicable' (scored as ment, or forgot what occurred to them in the ICU. This 0), although as might be expected the patients used this could account for the discrepancy of scores compared to score more frequently than the nurses. Reference to the nurses working in the environment on a daily basis. Diagram 1 shows that whilst it was the least used category. The subjective nature of the wording may limit the effec-for the nurses, it was the third most frequent category of tiveness of some of the items on the ESQ in eliciting the score for the patient group. It is important to note that the information required, for example item 1, the subjective mean age of the patient group was 59 and that four of the nature of being restricted (by tubes and lines). The word items on the ESQ referred to the hearing of noise in the 'stress' has itself a subjective nature to it. As there was no ICU. It may have been that a significant number of patients definition of stress given in the information sheets or the had difficulty with their hearing, accounting for their con-ESQ there may have been different interpretations as to sidering that these items were 'not-applicable' to them. Table 4 Most stressful items by highest score

Rank Patients Nurses

1st 4 (Being thirsty)	32 (Being in pain)
2nd 18 (Having tubes in your nose or mouth)	44 (Not being able to communicate)
3rd 44 (Not being able to communicate)	37 (Not being in control of yourself)
4th 1 (Being restricted by tubes/lines)	45 (Fear of death)
5th 28 (Not being able to sleep)	18 (Having tubes in your nose or mouth)
6th 37 (Not being in control of yourself)	15 (Not having treatments explained to you)

Table 5

Item Patients' Number of Nurses' Number

number Item rank patients rank of nurses

18 Having tubes in your nose or mouth	1st 26	4th 17
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- 4 Being thirsty 2nd 19 8th 4
- 19 Not knowing what time it is 3rd 16
- 6 Uncomfortable bed or pillow 4th 15
- 1 Being restricted by tubes/lines 5th 14
- 32 Being in pain 5th 14 1st 35
- 45 Fear of death 5th 14 4th 17
- 28 Not being able to sleep 6th 13 5th 8
- 44 Not being able to communicate 6th 13 2nd 30
- 13 Having to wear oxygen 7th 12
- 10 Feeling the nurses are watching the machines 8th 9 closer than they are you
- 22 Only seeing family and friends for a few minutes 9th 8 8th 4 each day
- 14 Missing your husband or wife 10th 7 10th 2
- 43 Hearing people talk about you 10th 7 9th 3
- 2 Not having the nurse introduce themselves 11th 6
- 37 Not being in control of yourself 11th 6 3rd 22
- 42 Being in a room which is too hot or too cold 12th 5 10th 2
- 29 Not being able to move your hands 13th 3
- 31 Having lights on constantly 14th 2 10th 2
- 7 Hearing the telephone ring 15th 1
- 25 Unfamiliar and unusual noises 15th 1 9th 3
- 34 Being stuck with needles 15th 1 7th 5
- 40 Having no privacy 15th 1 9th 3
- 35 Not knowing where you are 5th 8
- 15 Not having treatments explained to you 6th 6
- 16 Hearing your heart monitor go off 6th 6
- 11 Having your blood pressure taken too often 7th 5
- 36 Having nurses use words you cannot understand 8th 4
- 9 Having strange machines around you 9th 3
- 20 Hearing other patients cry out 9th 3
- 48 Financial worries 9th 3
- 21 Having men and women in the same room 10th 2
- 23 Not knowing when to expect things to be done 10th 2
- 49 Fear of AIDS 10th 2
- 50 Being pressurized to consent to treatments 10th 2

Also, one item refers to missing your spouse: it is possible comforts and inconveniences when they are a patient and that this was ‘not-applicable’ due to either the patient become compliant with the treatments and procedures; being single or their spouse being deceased. Unfortunately, One of the nurses made the comment that many long-term the demographic data did not include this detail. ventilated patients who are

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conscious and aware of their Also, it may be that the patients are not finding the ICU surroundings come to understand and expect certain environment stressful because they are conforming to the things to happen to them. This may also explain the 'good patient' role. Cochran & Ganong (1989 p. 1042) nurses' high scoring, as when they are placing themselves allude to this when they state that their findings in the 'patient role', they are scoring the items with the benefit of their knowledge and experience, a form of could be due in part to a 'good patient' syndrome in which the 'insider information'. Thus, as a patient, they feel more patient avoids labelling items as stressful for fear of being stressed because they know of potential difficulties and perceived a complainer. complications.

An alternative explanation for the 'good patient' role is Another explanation for the patients not finding the ICU that the patients are socialized to expect certain dis-environment as stressful as the nurses believe they would, and 45, fear of death). Whilst the nurses place item 32 (being in pain) at number one position, the patients place it in joint 5th position and instead place item 18 (having tubes in your nose or mouth) in first position with the nurses placing this in 4th position. Item 45 (fear of death) is placed in joint 5th position by the patients and joint 4th by the nurses.

The reasoning for the inconsistency among the placings in this table may be explained by the motives behind the scoring. The high placing of item 32 (being in pain), by nurses, may be that nurses believe they can take measures to alleviate patients pain. Whilst the patients place item 18 (having tubes in your nose or mouth) in first position this is placed 4th position by the nurses, reflecting the fact that while the patient can be made more comfortable 01234 regarding tubing, a tube in the nose or mouth is inevitable % for a ventilated patient. The nurses have positioned items Figure 1 A ranking of the most frequently occurring response by sample group (0-4 indicate the response according to the Likert-over which they have control, communication with the type scale and the higher the bar the higher the response was patient and the patients loss of control, higher up the ranked).%=patient;&=nurse. ranking. Comments is that the patients may be in denial. The patients may use denial as a defence mechanism and may not remember the At the end of the ESQ the subjects were asked for any experience they had. comments they wished to make and for any additional The information in Table 4 highlights that both sample items that they felt should be included in the questiongroups found items 18 (having tubes in your nose or naire. One nurse felt that there should be a way of measurmouth), 37 (not being in control of oneself) and 44 (not ing the noise level on the ICU and recording this on

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the being able to communicate) to be among the six most ESQ. Whilst three comments were made regarding the stressful items, when all the scores for an item were added noise levels on the ICU's used in the study, with one together. Thus there was a degree of commonality between patient mentioning the constant noisy environment, noise sample groups, though this was not consistent. did not feature highly amongst the ESQ scoring of the The fact that the nurses cite item 45 (fear of death) as sample groups. Another nurse wondered whether doctors among the most stressful may in fact reflect their fear of and nurses discussing the patients' condition in ear-shot the patient's death, as this would be the ultimate failure. of them but not with them should be included as an item.

Although this item was considered to be stressful by the Finally, only one nurse mentioned that she had often patients (see Table 5) it was not scored as highly as the thought about what it must be like to be an ICU patient. nurse group, possibly because the patient has an unerring Many of the patient comments were concerned with how faith in the medical profession's ability. good the treatment they received was: to say that they had These results do show a consistency with those of no complaints, and to praise the staff for their kindness Cochran & Ganong (1989). The most stressful items by and caring attitudes. However, this may be an example of mean score in their study were item numbers 18 (having the patients wishing to be seen as a 'good patient' as tubes in your nose or mouth), 34 (being stuck with discussed earlier. needles), 32 (being in pain) and 28 (unable to sleep) for the patients, and 32 (being in pain), 37 (not being in control of oneself), 18 (having tubes in your nose or mouth) and 1 (being restricted by tubes/lines) for the nurses. It can be This study was designed to assess whether the results of seen that two of the items from the Cochran and Ganong an earlier study by Cochran & Ganong were applicable to study have re-occurred among the most stressful for the the UK ICU. Also, it attempted to distinguish what the patients in this study, with three of the items for the nurse patient in the ICU perceives as being a stressor. It asked group re-occurring in this study in the same order. what the significant stressors were for the patient and Table 5 displays the inconsistency mentioned earlier in whether these were different from the nurses perception that when the top seven items (by individual choice) are of patient stressors. Finally, it also asked whether nurses listed, three items are shared amongst both sample groups working in the ICU can accurately perceive the stressors, (18, having tubes in your nose or mouth, 32, being in pain, and thus psychological needs, affecting their patients.

From the findings and results the following conclusions applicable'. By

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matching the patient with a nurse, who can be made: completes the ESQ as they believe that patient would allow for this.

1 Overall the outcomes were similar to those found by 2 The differentiation between patients who are admitted

Cochran & Ganong (1989). The items rated as most to the ICU as emergencies and those who have planned stressful in their study have continued to appear in this. admissions. There may be differences in stress between With the finding that nurses over-emphasized the stress the two types of patient if pre-admission information is

felt by the patient there is consistency with the Cochran given to patients before they are admitted to the ICU.

& Ganong study and with earlier studies. Thus, this The patients admitted as an emergency will not have

study has shown that the findings of Cochran & Ganong access to this information and may therefore suffer (1989) have a relevance in the UK ICU. unnecessary stress. 2 Nurses on ICU appear to have more concern over the 3 The use of different methodologies to counter any

items and categories that they believe they can change, limitations of using prepared lists of stressors. for example pain control. They perceive the patient as 4 The use of interview techniques with the staff and

being more concerned about these items. Thus, they may patient groups to counter any problems with the Likert be neglecting the patient's true stressors in favour of scale used. others. 5 The collection of demographic data should be extended 3 Nurses are able to perceive three of the top six most to include items such as marital status and family

stressful items for the patients. This would seem to show relationships. This may provide valuable insight into that nurses are aware of the fact that the ICU is stressful patient responses to items 14 (missing your husband or for the patient and the nature of some of the stressors. wife), 22 (only seeing family and friends for a few

4 If the patients were fulfilling the role of the 'good minutes each day) and 47 (being unable to fulfil

patient', then this may mean that the nurses need to family roles).

re-evaluate how they interact with the patients. If the

patients are not expressing their needs the nurse must Although the conclusions show that the nurses perceive

ensure that this is not because the patient is trying to some of the stress that the patient is faced with, there is

please them. This can only come about through support amongst the findings and results for the education

education of staff working in the ICU. of ICU staff with regard to the degree of stress experienced

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5 That nursing practice, at least in the two ICUs studied, by patients, and to the nature of the stressors. The perception needs to alter to cater for all the needs of the patients and of staff members as to exactly what it is that patients regard as stressful. Some recommendations regarding this finding would seem to be inaccurate. This education are listed below. would need to be re-evaluated in the light of further research. Although this was only a small study it has highlighted the difference between the perceptions of patients and staff. As the patients have indicated that they do find the ICU as to the significant stressors in the ICU environment. environment stressful, this needs to be addressed. Those Nurses should be aware that the care they provide may patients that are admitted to the ICU electively need to not always be aimed at the needs that the patient considers have a form of pre-admission visit to the unit accompanied most important. by their relatives and an ICU nurse. This time should be taken to explain the noise levels, the machinery and the to explore this. The study has only highlighted that the 'day' that the patient can expect, such as the number of patients do perceive the ICU environment as stressful; it staff who will care for them in a 24-hour period. has not addressed the issue of changing practice. With reference to Table 5, the listing of the stressors identified by patients in rank order, nurses should be aware that a considerable number of the items mentioned

RECOMMENDATIONS

as stressful are easily remedied. Sixteen patients men Due to the limitations as outlined above, there is a need tioned that not knowing what day it was contributed to for further study of this topic. In carrying out any further stress in the ICU. This could be remedied by the further research it would be appropriate to recognize the nurses communicating with the patients, even when they points made earlier. Therefore, the following would be are ventilated and sedated, to tell them the time, the day, recommended to further examine this topic: and also to introduce themselves (which was indicated by six patients as being stressful).

1 The use of matched pairs of nurses and patients. This There are inevitably going to be some items that nurses would allow the researcher to account for any peculiari-have little ability to influence. The most frequent response ties that occur to patients, for example the patient who to a stressful item was that of 'having tubes in your nose is deaf and would score certain items as 'non-or mouth'. This has already been discussed as being inevitable; however, it may be that reassuring the patient would nurses are unable to influence some of the items identified

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help, or alternatively the use of comforting measures such by patients as stressful, they can, with thought and imaginas flavoured mouth sticks to counter the taste or smell of ation, find ways to reduce the stressful nature of many of the plastic tubing. the stressors identified. This in turn may also reduce the Further studies should be undertaken to assess the level stress for nurses because they are actively helping their of stress the patients are under before implementation of patients. any changes, and after implementation. This would have the advantage of assessing the effectiveness and suitability References of the changes implemented. Ideally both of these studies should be undertaken on the same unit and with a con-Bergbom-Enberg I. & Haljamae H. (1989) Assessment of patients' trolled sample group to ensure that there is no sample bias experience of discomfort during respirator therapy. Critical involved. Care Medicine. 17(10), 1068–1072.

From the results presented it has been suggested that Chen Y.C. (1990) Psychological and social support systems in the education of nurses regarding patient perception of intensive and critical care. Intensive Care Nursing 6, 59–66.

stress needs to be addressed. This should be at a number Cochran J. & Ganong L.H. (1989) A comparison of nurses' and of levels. Whilst it should be addressed at the pre-patients' perceptions of intensive care unit stressors. registration level, it should also be addressed at the post-Connelly A.G. (1992) An examination of stressors in the patient registration level. There should be a development of the undergoing cardiac electrophysiologic studies. Heart & Lung theory and the practical elements of stress management 21(4), 335–341. and recognition for ICU nurses. This should be incorpor-Fisk D.N. (1991) Treatment of delirium in the critically ill patient.

ated into education programmes such as the ENB 100 Clinical Pharmacology 10(6),456–466.

intensive care course. In-house orientation programmes Foxall M.J., Zimmerman L., Standley R. & Bene Captain B. (1990) could address the issue of stress management in the ICU A comparison of frequency and sources of nursing job stress patient. Also the incorporation of relevant and up-to-date perceived by intensive care, hospice and medical-surgical research in this field into practice. nurses.

Seven years after the original study, by Cochran & MacKellaig J.M. (1987) A study of the psychological effects of Ganong, this research has identified similar stressors for intensive care with particular emphasis on patients in isolation. Intensive Care Nursing 2, 176–185. the patient in the ICU. This author feels that it is now time Presly A.S. (1991) Common terms and concepts in nursing to incorporate these findings and

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recommendations into research. In *The Research Process in Nursing* 2nd edn (Cormack nurse education and practice. By being aware of what the D.F.S. ed.), Blackwell Science, Oxford. patient finds stressful and concentrating less on what White D. & Tonkin J. (1991) Registered nurse stress in intensive nurses themselves see as stressful, it may be possible to care units – an Australian perspective. *Intensive Care Nursing* reduce the stress to which the patient is exposed. Although 7, 45–52.

APPENDIX 1: THE ENVIRONMENTAL STRESSOR QUESTIONNAIRE

Environmental Stressor Questionnaire

Extremely Very Mildly

stressful stressful stressful Not stressful N/A

1. Being restricted by tubes/lines
2. Not having the nurse introduce themselves
3. Having the nurse be in too much of a hurry
4. Being thirsty
5. Having your blood pressure taken often
6. Uncomfortable bed or pillow
7. Hearing the telephone ring
8. Frequent physical examination by doctor or nurse
9. Having strange machines around you
10. Feeling the nurses are watching the machines closer than they are watching you
11. Hearing the buzzers and alarms from the machinery
12. Nurses and doctors talking too loud
13. Having to wear oxygen
14. Missing your husband or wife
15. Not having treatments explained to you
16. Hearing your heart monitor alarm go off
17. Having nurses constantly doing things around your bed
18. Having tubes in your nose or mouth
19. Not knowing what time it is
20. Hearing other patients cry out
21. Having men and women in the same room
22. Only seeing family and friends for a few minutes each day
23. Not knowing when to expect things to be done
24. Being awakened by nurses
25. Unfamiliar and unusual noises
26. Watching treatments being given to other patients
27. Having to look at the pattern of tiles on the ceiling
28. Not being able to sleep

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29. Not being able to move your hands or arms because of intravenous (I.V.) lines
30. Being aware of unusual smells around you
31. Having lights on constantly
32. Being in pain
33. Seeing intravenous (I.V.) bags over your head
34. Being stuck with needles
35. Not knowing where you are
36. Having nurses use words you cannot understand
37. Not being in control of yourself
38. Not knowing what day it is
39. Being bored
40. Having no privacy
41. Being cared for by unfamiliar doctors
42. Being in a room which is too hot or cold
43. Hearing people talk about you
44. Not being able to communicate
45. Fear of death
46. Not knowing the length of stay in ICU
47. Being unable to fulfil family roles
48. Financial worries
49. Fear of AIDS
50. Being pressurized to consent to treatments

Please list the three most stressful items from the list above (by number)

1. 2. 3.

Any additional items that you feel should be included:

Any comments you wish to make: