

NURSE STRESS IN HOSPITAL AND SATELLITE HAEMODIALYSIS UNITS

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SUMMARY

Aim: To explore nurse stress in both in-centre hospital haemodialysis and satellite haemodialysis unit in an Australian city's health service.

Method: Focus groups from both in-centre and satellite dialysis units were undertaken followed by questionnaires generated by the focus group data.

Results: In-centre nursing staff rated the busyness of the unit as the maximum stress and stated that they felt this high level of stress on a daily basis. The most notable stressor for the staff at the satellite unit related to patient behaviour and the perceived unrealistic expectations of the patient followed by patients arriving unwell at the unit.

Conclusion: Nurses suffer stress on a daily basis in both in-centre and satellite dialysis units. The major stressors differ from in-centre to satellite dialysis units.

KEY WORDS Dialysis • Haemodialysis • Nursing • Stress

INTRODUCTION

Stress is a natural human response that enables an individual to respond to an event in which they need to react. Differing responses may result from the individual's personal characteristics, experiences, coping mechanisms and the circumstances under which the demands are being made (McVicar 2003).

The haemodialysis setting can be a stressful environment (Lewis *et al.* 1994). It contains complex technology operated by high-

ly skilled nursing staff. Nurses provide complex care to chronically ill people suffering from stage 5 chronic kidney disease (CKD) (Bevan 1998).

The haemodialysis setting can range from a large teaching hospital to a relatively autonomous community setting known as the satellite unit. The term 'satellite' relates to a lower acuity activity-type service where cost efficiencies are achieved with less staff, and in some satellite units, increased patient self-care (Agar *et al.* 2007). The general premise is that medically unstable patients are dialysed in an in-centre hospital unit where on-site medical care is readily available. Therefore, the main difference between a satellite and a hospital unit is the level of support (medical, nephrology, nursing, allied health) available (Agar *et al.* 2007).

Stress in the dialysis environment is complex and multifactorial. Causes of stress in the haemodialysis environment can be related to work colleagues (Munthy 1989; Wellard 1992; Lewis *et al.* 1994; Klersy *et al.* 2007), patient issues (Munthy 1989; Brokolaki *et al.* 2001), powerlessness (Wellard 1992; Brokolaki *et al.* 2001), isolation (Wellard 1992), lack of staff support (Lewis *et al.* 1994), personal stress (Lewis *et al.* 1994; Klersy *et al.* 2007) and workload (Lewis *et al.* 1994; Brokolaki *et al.* 2001). The aim of this study was to explore nurse stress in both in-centre hospital haemodialysis and satellite haemodialysis unit in an Australian city's health service.

BIODATA

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METHODS

FOCUS GROUPS

This study used a combined qualitative and quantitative approach. Data were generated by focus groups that were followed by questionnaires. Focus groups were used to gain an initial understanding of stressors and, in addition, to generate questions for a follow-up quantitative survey (Morgan 1997). The focus group participants were nursing staff working in an in-centre teaching hospital haemodialysis unit and a satellite unit based at a community hospital. We conducted two separate focus groups with nursing staff from the in-centre unit in order to maximise the number of nurses being available to participate. Experienced focus group facilitators led the hour-long focus groups. Confidential informed consent was gained in order to facilitate frank and open discussion. Participants were asked what they enjoyed about their work and what they considered were stressors within their occupation. The nursing staff were also asked to identify what strategies they used to deal with the stressors highlighted.

QUESTIONNAIRE

A questionnaire was developed using the focus group information combined with literature related to stress in dialysis units. The questionnaire consisted of two separate sections. The first section explored the severity frequency of each identified stressor (Tables 1 and 2). Participants were asked to rate stressors on a scale of 1 to 3 with 3 being the highest level of stress. The second section explored the responses by the participants to address these stressors (Table 3). Participants provided responses to strategy questions developed from the focus group sessions.

PARTICIPANTS

Nineteen nurses were involved in the focus group discussions. This included 18 registered nurses and one enrolled nurse. Convenience sampling was used with 18 out of a possible 33 nurses participating. Twelve nurses worked in the in-centre haemodialysis unit and seven worked in the satellite haemodialysis unit. All 18 participants attended their respective focus group and all 18 participants completed the questionnaire that followed. In the in-centre group (n = 12) five of the nurses worked full-time and seven worked part-time (between 2 and 4 shifts per week). There were 11 registered nurses and one enrolled nurse. The level of nursing experience

Identified issue	Stress level	Frequency
Workforce related		
Shift coordinator with patient load—very detrimental due to work pressure	3	>3 /week
Shiftwork versus family commitments	3	Daily
Insufficient staffing numbers	3	Daily
Having to chase people to work extra shifts on their off days	3	2-3/week
Staff mix not good—working with inexperienced staff	2-3	2-3/week
Meal breaks not taken	1	1-2/week
Not enough time for in-service to maintain or update skills/knowledge	3	Daily
Lack of communication between nursing and medical staff	2	Daily
Having to move between areas (e.g. ward to dialysis unit or vice versa) especially if inexperienced	3	Varies
Not taking time off when sick—no one to replace you; feel guilty if call in sick	2	2-3/year
Patient care related		
Not having time to discuss problems with patients	2	Daily
Not enough time to educate patients	3	Daily
Non-adhering patients	3	Daily
Patient allocation—patient acuity not always taken into account adequately—means uneven workload	2-3	Daily
Patient attendance times	2	Daily
People are always watching you	1-2	Daily
Finding time to consolidate skills	2	Daily
Work and study	2	Daily
Extra patients	2-3	Daily
Sending machine and nurse acute dialysis in other area	3	1-2/week

Table 1: In-centre haemodialysis unit stressors.

was between 8 and 30 years, and haemodialysis nursing experience was between 2 and 25 years. Only three nurses had less than 5 years' renal experience. Six nurses had 10 or more years' haemodialysis experience. The median length of experience was 19.6 years in general nursing and 9.8 years in haemodialysis nursing. In the satellite centre group (n = 7) all were registered nurses. Two nurses worked full-time and five worked

Identified issue	Stress level	Frequency
Complexity of patient problems and co-morbidities	3	Daily
No doctors on site, therefore have to manage patient problems yourself	0	Daily
Communication with doctors at parent hospital	1	x2 week
The question of whether to bother the doctors or not	0	Daily
Time management	0	Daily
Patient behaviour	2	Daily
Patients arriving to unit unwell	2	Weekly
High/unrealistic patient expectations	2-3	Daily
Size of pool of staff—difficult to replace sick leave	2	Fortnightly
Small numbers of staff within unit at one time caring for patients—no one to help when things go wrong	1	Weekly

Table 2: Satellite haemodialysis unit stressors.

part-time (between 1 and 4 shifts per week). The level of nursing experience was between 8 and 28 years, and haemodialysis nursing experience between 2 days and 4 years. The average length of experience was 22.6 years in general nursing and 13.5 years in haemodialysis nursing.

DATA COLLECTION AND ANALYSIS

Focus group discussion was recorded on audiotape and transcribed. The data were analysed according to Carey’s (1995) recommendations and themes were identified. The transcripts were read and re-read by one researcher and repeated words were identified. The surrounding phrases were analysed to provide context to each repeated word to ensure the meaning was consistent. Questionnaire data were analysed using SPSS Quantitative Software (SPSS 15.0 for Windows, SPSS Inc.,

Response	In-centre (n = 12)			Satellite (n = 7)		
	Yes	No	Sometimes	Yes	No	Sometimes
Do you talk amongst your work group?	11	0	1	7	0	0
Do you tend to ‘bottle it up’?	4	4	4	0	4	3
Is there someone you regard as a resource person to access?	12	0	0	7	0	0

Table 3: Stress responses.

Chicago, IL, USA). All responses from the survey (Table 3) for both groups were analysed using 2 x 2 tables and Fisher’s Exact test. Chi-square test would be inappropriate because of the small cell counts for some cells.

VALIDITY AND RELIABILITY/RIGOUR

One researcher transcribed data from the focus groups. Each focus group member received a copy of the transcript to validate that the transcript was a correct record of the focus group conversations. Each member of the focus group received a final copy of the research to comment on the accuracy of the findings.

ETHICAL CONSIDERATIONS

Ethical approval was received from the health service organisation’s Social and Behavioural Research Ethics Committee. The institution is not named as it may identify the research setting. Group members were informed of the purpose of the meetings, and were assured of anonymity, in order to facilitate frank and open discussion.

RESULTS

The in-centre unit nursing staff were consistent in what they considered to be challenges or stressors within their working environment. Twenty-one stressors were identified from the discussion, and themed and grouped into workload and patient care categories (Table 1). In-centre nursing staff rated the busyness of the unit as the maximum stress rating of 3 (severe stress) and stated that they felt this high level of stress on a daily basis.

The most notable stressor for the staff at the satellite unit (Table 2) related to patient behaviour and the perceived unrealistic expectations of the patient. An example of patient stressful behaviour was a patient yelling at a nurse wanting to ‘get on’ the machine. Patients arriving unwell at the unit also brought about feelings of stress. The small pool of staff created stress within the unit because it became more difficult to replace those on sick leave. In addition, the limited number of staff allocated per shift increased stress in the unit.

All participants talked with their work colleagues about the stressors or challenges faced within their working day but the majority also commented that they also had a tendency to occasionally ‘bottle up or stew on’ the issues that had arisen at work (Table 3). All participants were able to identify a resource

person that they felt could help with their problems; however, they all indicated some reluctance to approach the resource person for help if they felt that the person was also busy. The majority of respondents identified the nurse manager as their resource person, with two within the group identifying another senior staff member.

Both in-centre and satellite groups identified debriefing as an important tool in dealing with stressful events but the in-centre staff acknowledged that finding time to do this was extremely difficult. Satellite unit staff identified the involvement of mental health professionals, but were not identified by the in-centre staff. It appeared that if more time was 'found', many of their stressors could be supported with additional professional help. The differences noted in the strategies were closely related to the problems identified; the in-centre unit mostly being stressed by lack of time and the satellite unit mostly being stressed by patient behavioural problems.

DISCUSSION

Ashwanden (2004) suggested that there are special stresses in dialysis related to the unique relationship formed through caring for a patient for a long period of time. The unique nurse/patient relationship in dialysis units blurs many of the boundaries that generally exist in a traditional relationship. The blurring of boundaries can lead to transgressions in the same way that relationships are tested. Being able to maintain these boundaries while maintaining a relationship with the patient can bring about challenges and stresses in a dialysis nurse that are not apparent in other nursing fields. This can be both a positive and negative stressful aspect of dialysis nursing. Interestingly, a large Turkish study found that dialysis nurses were less stressed than their counterparts in other units (Arikan *et al.* 2007). They found that dialysis nurses had a lower risk of burnout and premature retirement from nursing when compared with intensive care and other specialist nurses. The positive aspects of dialysis nursing work, such as autonomy, patient contact and good teamwork (Munthy 1989), may be aspects of the dialysis unit that decrease the stress of the dialysis environment.

We found that stressors associated with patient behaviour were more evident as a significant cause of stress within the satellite unit than the in-centre unit. Although the patients were less acutely ill (Arkouche *et al.* 1999), there tended to be

increased isolation and less support for the nursing staff. Wellard (1992) reported unique nursing challenges in satellite units, such as the need for more education. The lack of support and education may lead to increased stress related to patient behaviour.

The comparisons between the different major stressors within the two units are of interest and have not been widely reported in previous studies. The difficulty covering shifts was highlighted as a significant cause of stress on a daily basis within the in-centre city unit, but was only a mild cause of stress on a weekly basis within the satellite unit. The busyness of the in-centre unit was another significant cause of stress being felt on a daily basis within the in-centre unit but was not reported as a source of stress within the satellite unit. The number of challenges rated as stressful, the severity of that stress amongst the in-centre nursing staff compared with the number and the degree of stressors within the satellite unit were significant and worthy of reflective consideration by senior administrators.

Our study reports workloads, insufficient staff numbers, insufficient time to care for patients, insufficient time to attend in-services or maintain skills, and poor communication lead to a high level of stress within the in-centre unit but were not reported by the satellite unit staff. Because the distance between the two units is approximately 10 km, a regional approach could be considered when looking at workload issues across all dialysis units within this region in an attempt to introduce parity amongst working conditions between the units.

LIMITATIONS

There are many limitations to this study and generalising of these results should be undertaken with caution. This study has only surveyed one city in-centre and one satellite dialysis unit. Numbers in this study were small and the statistical using 2 x 2 tables and Fisher's Exact test were applied, but no statistical significance in our results was found.

CONCLUSION (IMPLICATIONS FOR CLINICAL PRACTICE)

There is currently little evidence to suggest that the current increase in the numbers of people requiring dialysis will dissipate. This growth in numbers can only increase the workload and potential stress of the nurses caring for these people. This study has identified differences in the stressors in an in-centre

dialysis unit and a satellite dialysis unit. Managers, clinicians and educators need to understand the nature of stressors for nurses in dialysis units to provide an environment that limits nursing stress and improves patient care.

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