

Interpersonal Stress in Nursing: The development of the Difficult Patient Stress Scale

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ABSTRACT

Stress in nursing has been well documented in the literature for more than thirty years yet it remains a poorly understood problem by nurse educators, this is due in part to theoretical and methodological constraints to the investigation of this phenomenon and the multi-factorial nature of stress. This situation presents educators with the dilemma of preparing nurses to practice in an environment in which the scope, severity and impact of stressors is largely unknown. This paper describes the development of the Difficult Patient Stress Scale (DPSS), an instrument designed to determine the stress experienced by nurses when confronted by interpersonal conflict in patient care. The DPSS is based on the theoretical conceptualisation of stress proposed by DeLongis, Lazarus and Folkman (1988) and the

personality theory of Individual Psychology. The DPSS utilises visual analog scales to measure responses to selected typical, difficult nurse/patient situations. Validity and reliability testing over two years indicates that the DPSS is valid, reliable and suitable for use in the clinical environment. It is proposed that the DPSS may provide a useful instrument for exploring the frequency and impact of interpersonal stressors in nursing and may assist in the development of educational programs to better equip nurses in dealing with interpersonal conflict in their clinical practice.

INTRODUCTION

The aim of this study, has been to develop an instrument that is specifically designed to investigate, the degree of stress experienced by nurses when caring for patients exhibiting difficult behaviours. There is a need to develop objective, reliable and valid means of investigating the problem of interpersonal conflict, and the resultant stress experienced by nurses during patient care. Nursing has long been regarded as a stressful profession but research into the problem has been characterised by divergent methodologies lacking in specificity and depth. Investigators have often taken a global view of the stress phenomenon in patient care, attempting to identify the major stressors and to develop some degree of ranking amongst them. Attempts to compare differing clinical areas such as intensive care units (ICU) to non ICU environments have produced confusing results that shed little light on the specifics of the problem. A further difficulty of research in this area has been the evolving conceptualisations of what actually constitutes a stressor and how best to measure it. The methodological problems in the literature make it difficult to compare the findings of a large body of research relating to stress in nursing, apart from drawing the conclusion that nursing is a stressful occupation, a finding that most clinical nurses could have confirmed without the efforts of many researchers. It is notable that the educational preparation of nurses for dealing with patient related stress is almost non-existent in university undergraduate curricula (Santamaria, 1993). The current situation in this area of nursing practice may be the result, in part, of the lack of specific instruments designed to investigate nursing stressors.

Difficult Patient Stress Scale (DPSS)

The DPSS (Appendix 1) is an instrument designed to provide a measure of the self reported stress experienced by the subject in dealing with difficult patients. It comprises six hypothetical, written, difficult nurse/patient scenarios. Each scenario describes a situation where there is an actual or potential interpersonal conflict. The scenarios

are regarded as "typical" of situations that are relatively frequently encountered by nurses in the acute care environment. Subjects are required to imagine themselves as the nurse in the scenario and to indicate their level of frustration on a 100 millimetre visual analog scale, anchored at the lowest point by the statement "no frustration" and at the highest with the statement "most frustration experienced" Each subject can therefore achieve a maximum score of 600. The level of frustration reported by the subject is treated as being equivalent to stress as specified by DeLongis, Lazarus and Folkman (1988). The DPSS also allows subjects to give an indication of which of the situations occur most frequently in their work.

Visual analog scales (VAS) have been widely and effectively used as psychological research instruments. McCormack et al. (1988) note that VAS have significant advantages over Likert scales, particularly in the areas of the measurement of anxiety, pain and frustration. VAS have proven to be reliable and have the important advantage of providing measurement at the interval level, rather than the lower ordinal level possible with Likert based scales. This point is of particular importance, as it allows for more powerful statistical procedures to be used in the analysis of data. The validity of VAS in the measurement of anxiety and frustration has been demonstrated in studies conducted by Zealley & Aitken (1968), Norris (1971), Bond & Lader (1974), Herbert et al. (1976), McCormack (1988), and Maruff et al. (1994).

The initial item generation for the DPSS was based on characteristic

difficult patient behaviours reported in the literature (Ritvo, 1963; Stockwell, 1972; Podarsky & Sexton, 1988). Theoretically the DPSS content is based on the personality theory proposed by Alfred Adler and further developed in Individual Psychology (IP) and on conceptualisations of stress measurement developed by DeLongis, Lazarus and Folkman (1988). IP was chosen as the theoretical framework on which to develop the DPSS, as there are many striking similarities between the behaviours that nurses found difficult to deal with in the clinical environment and the behaviours described by Dreikurs (1953) and Manaster & Corsini (1982). The behaviours described in the current version of the DPSS involve attention getting mechanisms, (both active and passive in presentation), revenge, power and displays of inadequacy.

LITERATURE REVIEW

Stress in Nursing

It is generally acknowledged that nursing is an inherently stressful

occupation (Barut, 1978; Leatt & Schneck, 1980; Marshall, 1980; Maloney, 1982; Kelly & Cross, 1985; Cross & Fallon, 1985; Motowidlow et al, 1986; Dewe, 1987 & 1988; Power & Sharp, 1988; Humphrey, 1988; Harris, 1989; Sullivan, 1993) characterised by exposure to a wide range of potentially stressful situations and conditions, including: high workloads, irregular and unsocial hours of work, tiredness, the emotional demands of dealing with ill patients and their families and patients who have difficult behavioural characteristics.

Difficult Patients

Difficult patients as a source of stress in nursing is a recurrent but superficially explored theme in the literature. The reason for this appears to be due partly to the fact that the majority of authors have attempted to conduct broad ranging examinations of stress in nursing, which aim to identify the spectrum of contributing factors and the lack of suitable specific instruments. Studies identifying difficult patients as significant sources of stress to nurses include: Barut (1978), Leatt & Schneck (1980), Marshall (1980), Kelly & Cross (1985), Maloney (1982), Cross & Fallon (1985), Motowidlo et al. (1986), Dewe (1987, 1988), Power & Sharp (1988), Harris (1989) and Sullivan (1993).

Ritvo (1963) suggests that the classification by nurses of individuals as difficult patients occurs within the first 24 hours of hospitalisation. This view is supported by Stockwell (1972). The issue of organisational norms and values does appear to influence the process of stereotyping of patients, but seems to be restricted to the ethnic group and social class of the patient (Stockwell, 1972; Larson, 1977).

There is a general consistency in the classification of behaviours which are deemed to be difficult in studies conducted in America, England, Australia and New Zealand.

Ritvo (1963) identified the difficult patient as emotionally unstable, highly anxious, depressed, hostile, challenging, overly dependent or independent, aggressive, impatient, unappreciative and nonconforming. Podarsky and Sexton (1988) reported that patients described by nurses as demanding, complaining, frustrating, time consuming, requesting often, calling frequently, manipulative, female, impolite, unreasonable and uncooperative, were quickly classed as difficult.

The most frequent behavioural reactions reported by the nurses were to orient the patient to the hospital routine, show anger and avoid or punish the patient. Emotional reactions reported by the nurses included: anger, frustration, guilt and hurt. Arthur et al. (1992) clustered the responses of 214 nurses who were asked to indicate the patient behaviours that they found most difficult to deal with. The nurses identified non-cooperation, aggression, confusion, self harm,

withdrawal, anxiety and grief as the patient behaviours they found most difficult to deal with. The literature suggests that there appears to be a significant degree of consistency in the types of behaviours which are reported by nurses as being difficult to deal with on a daily basis.

It is believed that given the large number of studies reporting difficult patient behaviours as stressful to nurses, this group of patients represent an important and under investigated stressor in nursing practice.

METHOD

Subjects

The subjects comprised 228 registered general nurses working in the acute care environments of major metropolitan hospitals in Melbourne. Subjects were drawn from the first three levels of the Victorian nurses career structure, Grade 1. n=75, Grade 2. n=82, Grade 3. n=71. The decision was based on the fact that these nurses have the greatest clinical contact with patients and would therefore be most likely to have recent experience caring for difficult patients. The mean age of subjects was 27.9 years (SD = 6.55)

Sampling

To ensure that the subject population approximates the general population characteristics of nurses in Victoria, a random stratified sampling approach was used. The strata were determined through the use of demographic data on Victorian nurses contained in the Victorian Nursing Council's publication FACTS (1993). Potential subjects were then approached by the investigator and provided with a verbal and written explanation of the study.

Reliability Testing

Stability

An estimation of the DPSS stability over time was carried out utilising a test-retest procedure at 2 hours and again at 7 days with a subgroup of 44 nurses and calculating the correlation coefficients between the first and second scores of each subject.

Internal Reliability

Coefficient Alpha was calculated with a further group of 154 nurses. Determination of the Item to Total correlations employing methods defined by Anastasi (1988) was also carried out to identify the relative contribution of each item in the DPSS to the total score and to eliminate any redundant items. The minimum correlation level was set at .25 for the item to be retained in the scale.

Content Validity

Difficult Behaviours

Content validity of the Adlerian themes contained in each of the nurse/patient scenarios was examined by submitting the questionnaire to six Adlerian counsellors at the Monash University who were asked to classify each scenario in relation to the conceptualisation proposed by Individual Psychology.

A confirmatory factor analysis was also undertaken to establish that the DPSS was in fact adequately differentiating between active and passive difficult behaviours

Construct Validity

Frustration

The construct validity of the difficult nurse/patient scenarios was first investigated by submitting the scenarios to a group of 30 registered nurses who were asked to indicate their emotional response to each scenario on an open ended response sheet. This approach was used to determine the primary affective responses generated by the DPSS.

A further examination of construct validity was undertaken using the Known Groups Technique, where it was reasoned that nurses with a greater number of years of clinical experience would report a lesser degree of frustration, similarly, it was believed that nurses with higher qualifications would also report lesser levels of frustration. The age of the nurses was also correlated to their stress scores as it was believed that age would not influence the stress score reported

Interview Data

Semi-structured interviews were conducted with subjects scoring in the upper and lower 10% of the total group mean (n=13). The interviews were conducted to determine if there were identifiable differences in these nurses in the way they related to difficult patients. It was believed that through this technique, confidence in the DPSS' ability to discriminate individual subject differences may be increased. Each interview took approximately 30 minutes and was guided by an interview schedule. Analysis of the interview data involved a thematic content analysis technique.

Limitations

The limitations of the study include: the relatively small size of the sample, the possibility of a "Hawthorn effect" during data collection and the lack of unobtrusive measures such as observation. The lack of physiological measures of stress could also be regarded as a possible limitation of the study.

RESULTS

Table 1.
Descriptive statistics

ItemMeanSD

1.37.363621.6535

2.50.207824.1833

3.49.577924.9456

4.29.883120.0381

5.17.285718.3420

6.47.616924.7263

n=154

Reliability

Test-retest reliability for the DPSS was $r=.95$ ($n=44$, $p 0.00$) at 2 hours and $r=.89$ ($n=44$, $p <0.01$) at seven days.

Coefficient Alpha calculation yielded 0.8071 ($n=154$)

Table 2
Corrected item total correlation

Itemr

1..7376

2..6404

3..5747

4..4611

5..3525

6..6357

n=154

* All correlations are significant at <0.001

Content Validity

Table 3.
Factor loadings following varimax rotation

Scenarios	Factor 1	Factor 2	Factor 3
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1.850

2.781

3.730

4.746

5.841

6.777

n=154

Construct Validity

Table 4.

Scenario	Affective Response%
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1. Frustration and anger 78.1

2. Frustration and anger 83.3

3. Frustration 40.0

4. Frustration 26.6

5. Frustration and anger 30.0

6. Frustration and anger 83.3

n=30

Table 5.
Correlation coefficients between groups and DPSS totals

Groups	n	r	p
Years of clinical experience	154	.28	<0.05
Qualifications	154	.32	<0.05
Age	154	.18	n.s

n=154

Table 6.
Interview response themes by DPSS group

DPSS stress category
High
Low
Question (n=7)
(n=6)

How often do you encounter patients who display difficult behaviour
Daily Often

What are the most difficult types of behaviours
Aggression Aggression
Non compliance

What feelings do you experience when caring for these patients
Frustration Frustration
Anger
Anxiety

What is your most common response
Explanation Ignore the of treatment
behaviour
Limit contact Negotiate
with patient

Do you have enough support when caring for these patients
No No

What type of support would best help you
Debriefing In service
in caring for these patients
sessions education

DISCUSSION

Reliability

The test-retest stability of the DPSS (Table 2) over time suggests that it is relatively stable over the time frame specified. Coefficient Alpha results also support the internal reliability of the scale.

Content Validity

The confirmatory factor analysis (Table 3) with an a priori specification of three factors, lends further support for the content validity of the DPSS. Items 1, 2, 3 and 6 loaded to factor 1 which represented active difficult behaviours. Item 4 loaded to factor 2 which was representing passive difficult behaviour and item 5 loaded to factor 3 which represented a different passive difficult behaviour characterised by a display of inadequacy. These results suggest that the DPSS content validity is relatively strong in differentiating between active and passive difficult behaviours and is consistent with Adlerian theory underpinning IP. The factor analysis was also consistent with the results of the expert judge panel results, which indicated that items 1, 2, 3, and 6 represented active difficult behaviours and items 4 and 5 passive ones.

Construct Validity

The construct validity testing indicated by results in Table 4 suggest that the DPSS is in fact measuring the frustration levels experienced by subjects in response to the scenarios. Responses to items 4 and 5 (passive behaviours) showed a relatively large spread of responses but the most consistent theme which emerged was that of frustration. It was believed that items 4 and 5 should be retained in the DPSS, as they would enable the future investigation of how nurses respond to this sub-group of passive behaviours.

The results of the Known Groups analysis (Table 5) indicated that the frustration levels, which subjects experience, are mediated by their years of experience and their level of qualifications but not by their age. One interpretation of this finding is that it may be possible to decrease the level of frustration/stress experienced by clinical nurses through education, ideally provided in the clinical practice environment.

The predominant themes which emerged from the interviews (Table 6) indicated that there are identifiable differences between subjects in the high stress group and those in the low stress group. There was a consistency in the types of behaviours which the nurses found difficult, but differences in the range of affective responses,

approaches taken to the patient and the support needs identified by each group. Of note was the perception of a lack of support for dealing with these patients. The results of the interviews are not intended to be presented as definitive evidence of how nurses generally deal with the difficult patient but rather they are suggestive of the ability of the DPSS to discriminate between nurses who experience high or low stress when confronted with difficult patient behaviours.

On the basis of results to date, it appears that the DPSS is a relatively reliable and valid instrument for measuring patient generated stress. Development of the instrument should continue by comparing DPSS results to other valid measures of stress. Ideally the DPSS results should be linked to biological measures of stress such as galvanic skin responses, cardiovascular effects or health outcomes. These future studies may pose some methodological problems but if designed properly they would contribute significantly to the development of accurate and useful instrumentation. A need exists for such instruments, if we are to clearly understand the nature, intensity and scope of this problem in nursing. The ultimate goal being to assist nurses to more effectively manage interpersonal conflict in patient care.

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APPENDIX 1.
Difficult Patient Questionnaire.

Section 1.

1.
Name:.....
.....
2. Contact phone number:.....
3. Age:.....
4. Employment grade: 1 2 3 (Please circle)
5.
Hospital:.....
6. Years since graduation:.....
7. Nursing qualifications: (Please list below)
.....
.....
.....
.....
8. Do you identify with a particular religion? Yes No
9. If so, what is your religion?.....
.....

Section 2.

Please read the following scenarios and imagine yourself as the nurse involved. After you have read the scenario, place a mark on the line below to indicate your level of frustration in such a situation. The scale begins at a point of no frustration to a point indicating the

greatest frustration you have ever experienced at work.

SCENARIO 1 You are caring for Robert Jones, a 24 year old man who has had an appendicectomy two days ago. His post-operative recovery has been physically uneventful, but he has become very demanding, he frequently calls you for assistance with activities which he is capable of achieving without help. He states he is worried about his recovery and thinks he will be unable to return to work. Your reassurances appear to have no effect.

No frustration Most frustration experienced

2

SCENARIO 2 Bradley Kerr, 16 years old is recovering from a recent fractured ulna sustained in a football match. Bradley has been a difficult patient to care for as a result of his rebellious behaviour and unwillingness to comply with any of the ward routines. He is loud and raucous and makes frequent sexual innuendos when being cared for by you and other nurses. When confronted with his behaviour he laughs off any suggestions that his behaviour is inappropriate and continues with his provocative comments.

No frustration Most frustration experienced

SCENARIO 3 You are caring for Sally Rodgers, 18 years old who sustained lacerations to her back and a fractured femur in a motor cycle accident two weeks ago. Her wounds subsequently have become infected with a resistant staph aureus and require frequent dressings. Sally finds the dressings painful and becomes angry when it is time for them to be done. She asks you not to do the next dressing but when you explain the necessity for the treatment she becomes abusive to you and as you leave the room to prepare the equipment required she calls you a "bitch" and throws her water jug on the floor. When rebuked by you she

resorts to further personal abuse.

No frustrationMost frustration experienced

SCENARIO 4 Mrs Green, 42 years old, has been in hospital for the past 6 days for stabilisation of her recently diagnosed diabetes. You have attempted to educate her about how to monitor her blood glucose levels and how to calculate and administer her insulin. Mrs Green tells you frequently that she cannot learn how to manage her own treatment. She fumbles with the equipment and soon after gives up, she becomes tearful and states that she is too stupid to understand the procedure.

No frustrationMost frustration experienced

3

SCENARIO 5 Julie Murry, 32 years old, is admitted to your ward for investigation of her persistent lower back pain. She appears to be shy, speaks little to either the staff or the patients in her room and when approached apologises frequently for causing you "extra work". You spend half an hour with her in the afternoon to take a nursing history of her back problems and are surprised to find that she responds positively to you and seems eager to answer questions and discuss her background and interests. You note that once the interview is finished that Julie reverts to her quiet behaviour.

No frustrationMost frustration experienced

SCENARIO 6 Roger Marshall is recovering from fractured ribs sustained in a car accident 5 days ago. He is extremely stubborn about cooperating with his treatment. He refuses to do any chest physiotherapy, will not ambulate and repeatedly questions you about the need and dosage of his medications. Mr Marshall will not discuss why he refuses to cooperate apart from saying that he is the best judge of what is best for his recovery and does not need you to tell him what he needs

No frustration Most frustration experienced

Section 3.

3.1 Which of the above scenarios do you believe you have encountered most often ?

1. 2. 3. 4. 5. 6. (Please circle)

Thank you.