

ABSTRACT

This paper describes the replication of the Nursing Stress Scale (NSS), translated into a Spanish version, as an instrument to measure the frequency of sources of stress suffered by nurses in the hospital environment. The NSS was administered to 195 nurses on a general, public hospital. Our factor analysis found nine components. Validity was determined by correlation with measures of the STAI. In addition, we studied correlation with role conflict and ambiguity, and occupational commitment

INTRODUCTION

Gray-Toft and Anderson (1981, 1981b, 1983) designed an instrument to measure the frequency in which hospital nurses suffered work-related sources of stress: the Nursing Stress Scale (NSS). In their study they obtained a factor structure of 7 dimensions: Death and dying, Conflict with physicians, Inadequate preparation, Lack of support, Conflict with other nurses, Work load, and Uncertainty concerning treatment.

Other investigations about nurses stress studied some of those sources of stress: too much work, interpersonal relations and relations with hospital administration (Callaghan et al, 2000); death and dying, professional image, relations with the medical staff and physicians, emotional overinvolvement, anger, and balancing work and home demands (Kushnir et al, 1997); death and dying (Downey et al, 1995); interpersonal relations and death (Gruppy et al, 1991); work overload, relations with other staff, difficulties with critically ill patients, treatment of patients, and dealing with difficult or helplessly ill patients (Dewe, 1987). In Spain, Peiro (1994) studied job autonomy, feedback from colleagues, goal standardization, tenure, and workload as role stress antecedents; and Rieg et al (1989), as sources of stress: possibility of making mistakes, relations with physician, other nurses and administration, death and dying.

Occupational commitment has also been studied in relation with nurse stress (Omad et al, 1999; Glazer, 1999).

Besides, role conflict and ambiguity appears also related to nurses occupational stress (Glazer, 1999; Peiro, 1994)

In this research we hypothesized that the Spanish version of NSS has the same structure as the original one. We also expected high positive correlations between NSS and STAI measures.

In our investigation we administered a Spanish version of the NSS to a sample of hospital nurses. We partially replicated the factorial structure found by Gray-Toft.

We also administered STAI to measure trait and state levels of anxiety.

In a second moment, we administered other questionnaires to search for relations among NSS and role conflict and ambiguity, and commitment.

METHOD

The Scale and other questionnaires (Organizational Commitment of MOWDAY et al., 1982; Role Conflict and Ambiguity of Cortland et al., 1983) were administered to a sample of 195 nurses of 37 Departments on a general, public hospital.

RESULTS

We factor analyzed the scale items using a Principal Components analysis with quartimax rotation.

The analysis identified 9 factors. We show in Table 1 only loadings of 0.40 or higher. Two factors are related to the physical environment; five factors have to do with psychological environment, and two factors refer to social environment:

Physical Environment:

- *Factor II: Work overload.* This factor includes problems with the amount of people and time necessary to complete tasks, and with scheduling.
- *Factor IX: Computer breakdown.* This factor isolates a stressful situation concerning computer failure.

Psychological Environment:

- *Factor III: Death.* Includes those situations that involve death of patients and the feeling of not being able to help with the emotional needs of the patients' families.
- *Factor IV: Inadequate preparation.* Includes those situations in which appears a perceived lack of knowledge due to conflict with physician or for being asked when no answer is available, and those concerning the emotional need of patients and their families.
- *Factor V: Pain and suffer.* Includes those situations in which nurses task causes pain to patients, nurses watch patient suffer and nurses cannot do anything to help when patient doesn't improve.
- *Factor VI: Lack of support.* This factor includes the lack of opportunities to talk, express, and share feelings.
- *Factor VIII: Mistake.* In this factor are collected items related to the probability of making mistakes, due to lack of medical information about patients, unpredictability working conditions or feeling not prepared to support emotional needs of patients.

Social Environment

- *Factor I: Uncertainty related with conflicts with physicians and other nurses, and lack of knowledge.* This factor has a large number of situations involved in the relations with physician and other nurses, that causes uncertainty in nurses (disagreements, conflicts, criticisms, no adequate information) and inadequate preparation to help emotional needs or use specialized equipment usage.
- *Factor VII: Conflict with supervisor.* This factor includes been criticized by supervisor or physician, and having conflict with supervisor.

Reliability

The internal consistency obtained was Coefficient alpha of 0.92 and Standardized item alpha 0.92

Validity

Factors and total scale correlation of the NSS with anxiety levels was moderated and significant, as hypothesized. Figure 1 shows those correlation.

DISCUSSION

Social and cultural determinants may explain the differences between Gray-Toft factor distribution and ours (Glazer, 1999), as well as the differences of functions and perception of work environment existing among the samples of nurses.

Our Factor IX, Computer breakdown, is isolated from other sources of stress which seem to be more proper of a nurse work. Nurses computer-using might be not as usual in our sample as in the former Gray-Toft's study, and may be seen as an "others' problem" in the population of nurses studied here.

These different social and cultural points of view seem to be founded in the fact that physicians are seen as a uncertainty maker, questioning own competence, together with other nurses, and with the perception of not knowing.

Supervisor paper seems more remarkable for this sample as it conforms one single factor related to having conflict with, or been criticized by them.

Another difference appears in the perception of death and suffer. Here both sources of stress are separated: one factor related with death, one factor related with patient pain and suffer.

We found that the tendency to leave the organization and organization commitment do not correlate with stress, but lack of commitment does. Stress correlation with role knowledge was not significant, although negative. Figure 2 shows the significant correlations found.

Besides considering social and cultural effects, we think more studies are necessary to confirm the transcultural factors of the NSS.

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