Effects of Stress Management Intervention on Stress Levels of Nurses Practicing in Intensive Care Units #92350

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Introduction

The 21st century is characterised by a climate of increased globalisation, rapid migration and the increase in numbers of the population worldwide. The shortage of nurses especially, in particular, specialist nurses has added to the burden of workplace stressors in the intensive care area. From an occupational health, wellness and human resources perspective, work related stress is a major workplace hazard and risks require identification, assessment and management. The WHO agrees with the latter statement and thus its needs to be addressed and managed effectively (WHO, 2010) South African registered nurses, working in the intensive care unit (ICU) experience many physical and psycho-social hazards and risks. Stress provoked by failure to meet work demands, leads to illness, injury, and psychological suffering. It is therefore necessary to address the leading aspects to stress and work burnout.

Aim of the Study

The aim of the study was to examine the effect of a stress management intervention on the stress levels of nurses practicing in ICUs.

Primary Outcomes: Enhanced use of healthy and effective occupational stress management coping skills and increased levels of stress intensity.

Secondary Outcomes:
- Stress levels measured pre and post-test by making use of the Expanded Nursing Stress Scale (ENSS).
- Efficacy of stress management intervention determined in the short term.

The study was conducted in the adult ICUs of one public hospital in South Africa.

Methods

Design

A quasi-experimental non-equivalent control group design was selected for this study. It comprised of pre-testing, development of the intervention and post testing.

Sample

Both groups of nurses were recruited from the same hospital by means of convenience sampling. The sample size was determined by power analysis (two-group χ² test with a 0.050) one-sided significance level with 80% power to detect the difference between a smaller proportion (π₁, of 0.500) and a larger proportion, (π₂, of 0.711). The sample size in each group is 65 (n=65) in each of the control and intervention groups (n=130 total).

Intervention Programme

The intervention programme, which was based on assessing participants needs and concerns, an extensive literature review and an online Stress Management Training Manual (HHWC, 2013). Workshops were used to implement the developed stress management intervention. In total 4 workshops were conducted in this study, on average each workshop lasted 6 to 7 hours.

Measures

The ENSS was developed by French et al. (2002). It is a self-reporting questionnaire consisting of 57 items and 9 subscales on a 5-point Likert scale, ranging from never stressful to extremely stressful. Possible scores range from 57 to 228, with higher scores representing higher stress levels.

Data Analysis

The quantitative data were analysed by means of summary statistics. Statistical tests included Chi-square, independent t-tests, Kruskal Wallis tests and Scheffe tests. Testing was done at the 0.05 level of significance. Statistical software STATA version 13 was used to analyse the data.

Results

Characteristics of the sample

Females accounted for 86% (n=99) of the sample. One third (34.9%, n=39) were in the age category of 40 to 48 years, and a close majority had between 1 to 5 years ICU experience. Most (55.5%, n=63) nurses had a diploma level qualification, and most (57.3%, n=69) were ICU qualified.

Comparison of group outcomes at baseline

At baseline, the control and intervention groups exhibited high levels of stress (figure 1).

![Figure 1: Rank ordering of mean importance of the 9 ENSS subscales for the pre-test data by study groups](image1)

Effects of stress management intervention on level of stress

The results indicated that at 4 weeks after stress management the intervention group had significantly lower levels than the control group (figure 2).

![Figure 2: Rank ordering of mean importance of the 9 ENSS subscales for the post-test data by study groups](image2)

Conclusions

There was clear evidence of significant differences (p=0.000) emerging in all 9 ENSS subscales with respect to level of stress when considering the pre-test and post-test score. This indicates that the stress management intervention had an effect on the stress levels of nurses practicing in the ICUs at the selected study site. Evaluation of the stress management intervention also revealed an overwhelming number of nurse-participants experienced all activities as meaningful, with contributory worth.

Feedback

Participants recommended and emphasised strongly that these workshops should be compulsory and must be held regularly and during “on duty” times to make sure everybody has the opportunity to attend. One participant stated that; “teach others to do what you do, coaching, so as to help reach the rest of the nursing population.”

Limitations

The small sample size and non-probability sampling in one hospital might limit its generalisability to different ICU. The intervention group also constituted nurses who were interested in participating in the stress management, which may have introduced a biased sample because those nurses were interested in the topic meaning they started with a positive outlook. Although a power sample was calculated, the study did not achieve the desired sample size (130 in total) despite numerous attempts by the researcher to recruit more participants to the study. Redundancy in the recruitment of participants was reached at 114 nurses.

Conclusion

The ICU nurses experienced the stress management intervention as meaningful and positive. Stress management interventions on a continuous basis can facilitate enhanced coping skills in a sustainable manner and therefore increase the quality of work life of ICU nurses and patient outcomes.

References


