# Below is what your colleague has completed:

**Stress management intervention and the quality of nursing care**

Quality care can be argued to be the most important aspect of a nurses’ clinical activities. The ultimate goal of nursing services is to provide appropriate care to improve patient outcomes (Stuart & Johns, 2011). From a patient perspective, quality care is defined by the fulfilment of physical, psychosocial and communicational dimensions and trust in the nurses providing such care (Lucas et al., 2010).

Additionally, nurses are also held accountable for the quality of care given by them from both an ethical and legal standpoint (Tippett & Farin, 2018). From a workplace or business standpoint, services are required to remain effective, efficient but also economical (Farin, 2018). As a result, the need to uphold this quality can increase employee stress in the workplace.

Among the factors that influence the dimensions of quality care provided by nurses is occupational stress (James, 2013). This may result from not only changes in the structure of the workplace but also frequent exposure to patients’ pain and suffering, administrative activities, the concerns and problems of other staff members or colleagues, inappropriate working conditions (for example rostering/shifts), as well as the pressure of upholding appropriate quality care (Smith et al., 2015). Previous research has indicated that those who work in the Intensive Care Unit (ICU) undergo more stress than employees in other hospital wards (Adams et al., 2010). These employees have a higher work load and greater working hours, are more involved in interventions and care, and have increased contact with patients (Adams et al., 2010). This then questions the quality of care such professionals are able to give to patients admitted to these units.

Stress management appears to be a growing concern within large and high-stress workplaces. However, in hospital settings, engaging in such techniques in these environments can be challenging. There has been a growing trend to educate individuals on stress reducing practices and encourage the practice of such methods within the home, or in a place of less-stress. Professor George Wellings and colleagues who work in the field of stress management have developed a set of tools for organisations to give to employees to reduce stress in the workplace, with the intention of increasing well-being and productivity (Wellings et al., 2016). These resources aim to reduce the impact of stress on an individual through easy at home activities. Such methods include: Transcendental Meditation, Progressive Muscle Relaxation and Guided Imagery. One, 3-hour training session is all that is required, where employees are given demonstrations of all three techniques. Employees are then encouraged to choose one technique and practice daily. Within one month Wellings and colleagues (2016) suggest employees will begin to feel less stressed and as a result, be more productive.

This technique has been used in education and defence settings however has not be employed in health care, another high-stress environment. This research first aims to explore whether stress has any relationship with the perceived quality of care and if the intervention is successful in the healthcare setting, particularly for those employed in the ICU. The research is also interested whether current methods/support systems to reduce stress are effective or if further interventions, such as the one suggested by Wellings et al., (2016) need to be employed.

*Hypothesis 1: There is a negative relationship between the perceived quality of care and pre-test stress scores for each ward of interest at the Townsville University Hospital. As stress-increases it is predicted that perceived care quality will decrease and vice versa.*

*Hypothesis 2: The stress management intervention will show a decrease in stress scores from pre-test to post-test.*

*Hypothesis 3: There will be no association between support satisfaction levels and ward. As support services are the same hospital wide.*

*Research paper continued…*

#### Methodology

##### Participants

Participants were 238 volunteers from the Intensive Care Unit and the Emergency Department at the Townsville University Hospital, in North Queensland Australia. Recruitment sites included the hospital weekly newsletter were participants were given an email address to contact if they wished to participate.

##### Materials

All participants/volunteers were asked to complete a questionnaire containing 32 questions for the pre- test phase and 10 questions for the post-test phase. The questionnaire assessed demographic variables relating to the participants current work environment and also:

##### Perceived quality of care.

Quality of care was measured by 10 questions asking perceptions their perceptions of the quality of care their current ward gave to patients. Questions such as “You feel your current ward has an adequate staff-patient ratio” and “You have suitable shift allocations that allow for appropriate breaks/days-off” were used to assess quality of care. This variable was measured on a 7-point Likert Scale, where 1 was “Strongly agree” and 7 was “Strongly disagree”. An average value was taken to give each participant one score for perceived quality of care, with high scores indicating high perceived quality of care.

##### Stress.

Stress was measured by 10 questions adapted from the “Perceived Stress Scale”. Questions such as “In the last month, how often have you been upset because of something that happened unexpectedly?” were used to measure a participant’s stress on a 7-point Likert Scale. Scores were added to give each participant a total stress score for the pre-test and post-test, with scores ranging between 10 and 70.

High scores indicated high participant stress.

##### Perceived level of support.

Perceived level of support was measured by one question which ask respondents to indicate whether they thought the support they received from line managers etc. to manage stress was “Low”, “Adequate” or “High”.

##### Procedure

After contacting the researchers, participants read an information sheet and indicated their consent to participate in the study. Participants then completed the questionnaire. Participants were then given instructions for each of the three stress-reducing strategies and were advised to choose their preferred activity and practice daily. After one-month, participants were contacted for the follow-up component of the study. All statistical analyses were performed in the SPSS computer program. The study received ethical approval from the James Cook University Ethics committee.

#### Results

*\*your section\**

#### Discussion

*\*your section\**

# Below are the SPSS outputs from the analyses conducted:

***Data sheet variables:***

* Gender *(Gender)*

### Male or female

* Age *(Age)*

### Number in years

* Country of origin *(Country\_origin)*

### Australian or International

* Employment basis *(Employment\_type)*

### Full-time, part-time or casual

* Years of experience *(Years\_experience)*

### Number in years

* Ward of employment *(Ward\_employed)*

### ICU or ED

* Perceived quality of care in current ward (*Quality\_care)*

### Average value of 10 questions

* + Between 1 and 7, where high scores are high perceived quality of care
* Stress-test pre-test score *(Stress\_pretest)*

### Total score from 10 questions

* + Scores range between 10 and 70, where 10 is low stress and 70 in high
* Stress-test post-test score *(Stress\_posttest)*

### Total score from 10 questions

* + Scores range between 10 and 70, where 10 is low stress and 70 in high
* Perceived level of support (*Support)*

### Low, Adequate or High

***Descriptive statistics:***

## Descriptives

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Descriptive Statistics** | | | | | |
|  | N | Minimum | Maximum | Mean | Std. Deviation |
| Age | 238 | 20 | 62 | 33.71 | 10.382 |
| Years\_experience | 238 | 0 | 38 | 11.01 | 11.692 |
| Quality\_care | 238 | 1 | 7 | 4.30 | 2.027 |
| Stress\_pretest | 238 | 20 | 66 | 36.11 | 13.075 |
| Stress\_posttest | 238 | 10 | 40 | 19.72 | 6.415 |
| Valid N (listwise) | 238 |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Gender** | | | | | |
|  | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Male | 72 | 30.3 | 30.3 | 30.3 |
| Female | 166 | 69.7 | 69.7 | 100.0 |
| Total | 238 | 100.0 | 100.0 |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Country of origin** | | | | | |
|  | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Australian | 188 | 79.0 | 79.0 | 79.0 |
| International | 50 | 21.0 | 21.0 | 100.0 |
| Total | 238 | 100.0 | 100.0 |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Employment\_type** | | | | | |
|  | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Full time | 135 | 56.7 | 56.7 | 56.7 |
| Part time | 73 | 30.7 | 30.7 | 87.4 |
| Casual | 30 | 12.6 | 12.6 | 100.0 |
| Total | 238 | 100.0 | 100.0 |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Ward** | | | | | |
|  | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | ICU | 80 | 33.6 | 33.6 | 33.6 |
| ED | 158 | 66.4 | 66.4 | 100.0 |
| Total | 238 | 100.0 | 100.0 |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Support** | | | | | |
|  | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Low | 69 | 29.0 | 29.0 | 29.0 |
| Adequate | 88 | 37.0 | 37.0 | 66.0 |
| High | 81 | 34.0 | 34.0 | 100.0 |
| Total | 238 | 100.0 | 100.0 |  |

***Correlation:***

## Correlations Ward = ICU

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Descriptive Statisticsa** | | | | | |
|  | N | Minimum | Maximum | Mean | Std. Deviation |
| Stress\_pretest | 80 | 20 | 61 | 33.11 | 11.320 |
| Quality\_care | 80 | 1 | 7 | 4.00 | 2.099 |
| Valid N (listwise) | 80 |  |  |  |  |
| a. Ward = ICU | | | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Correlationsa** | | | |
|  | | Stress\_pretest | Quality\_care |
| Stress\_pretest | Pearson Correlation | 1 | -.238\* |
| Sig. (2-tailed) |  | .034 |
| N | 80 | 80 |
| Quality\_care | Pearson Correlation | -.238\* | 1 |
| Sig. (2-tailed) | .034 |  |
| N | 80 | 80 |
| \*. Correlation is significant at the 0.05 level (2-tailed). | | | |
| a. Ward = ICU | | | |

**Ward = ED**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Descriptive Statisticsa** | | | | | |
|  | N | Minimum | Maximum | Mean | Std. Deviation |
| Stress\_pretest | 158 | 20 | 66 | 37.63 | 13.662 |
| Quality\_care | 158 | 1 | 7 | 4.45 | 1.979 |
| Valid N (listwise) | 158 |  |  |  |  |
| a. Ward = ED | | | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Correlationsa** | | | |
|  | | Stress\_pretest | Quality\_care |
| Stress\_pretest | Pearson Correlation | 1 | -.132 |
| Sig. (2-tailed) |  | .098 |
| N | 158 | 158 |
| Quality\_care | Pearson Correlation | -.132 | 1 |
| Sig. (2-tailed) | .098 |  |
| N | 158 | 158 |
| a. Ward = ED | | | |

***Paired samples t-test:***

## T-Test

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Paired Samples Statistics** | | | | | |
|  | | Mean | N | Std. Deviation | Std. Error Mean |
| Pair 1 | Stress\_pretest | 36.11 | 238 | 13.075 | .847 |
| Stress\_posttest | 19.72 | 238 | 6.415 | .416 |

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| --- | --- | --- | --- | --- |
| **Paired Samples Correlations** | | | | |
|  | | N | Correlation | Sig. |
| Pair 1 | Stress\_pretest & Stress\_posttest | 238 | .281 | .000 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Paired Samples Test** | | | | | | | | | |
|  | | Paired Differences | | | | | t | df | Sig. (2-tailed) |
| Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | |
| Lower | Upper |
| Pair 1 | Stress\_pretest - Stress\_posttest | 16.391 | 12.846 | .833 | 14.750 | 18.031 | 19.684 | 237 | .000 |

***Chi-square test for trend:***

**Crosstabs**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Case Processing Summary** | | | | | | |
|  | Cases | | | | | |
| Valid | | Missing | | Total | |
| N | Percent | N | Percent | N | Percent |
| Ward \* Support | 238 | 100.0% | 0 | 0.0% | 238 | 100.0% |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Ward \* Support Crosstabulation** | | | | | | |
|  | | | Support | | | Total |
| Low | Adequate | High |
| Ward | ICU | Count | 42 | 19 | 19 | 80 |
| Expected Count | 23.2 | 29.6 | 27.2 | 80.0 |
| % within Ward | 52.5% | 23.8% | 23.8% | 100.0% |
| % within Support | 60.9% | 21.6% | 23.5% | 33.6% |
| % of Total | 17.6% | 8.0% | 8.0% | 33.6% |
| ED | Count | 27 | 69 | 62 | 158 |
| Expected Count | 45.8 | 58.4 | 53.8 | 158.0 |
| % within Ward | 17.1% | 43.7% | 39.2% | 100.0% |
| % within Support | 39.1% | 78.4% | 76.5% | 66.4% |
| % of Total | 11.3% | 29.0% | 26.1% | 66.4% |
| Total | | Count | 69 | 88 | 81 | 238 |
| Expected Count | 69.0 | 88.0 | 81.0 | 238.0 |
| % within Ward | 29.0% | 37.0% | 34.0% | 100.0% |
| % within Support | 100.0% | 100.0% | 100.0% | 100.0% |
| % of Total | 29.0% | 37.0% | 34.0% | 100.0% |

|  |  |  |  |
| --- | --- | --- | --- |
| **Chi-Square Tests** | | | |
|  | Value | df | Asymptotic Significance (2-sided) |
| Pearson Chi-Square | 32.416a | 2 | .000 |
| Likelihood Ratio | 31.466 | 2 | .000 |
| Linear-by-Linear Association | 21.830 | 1 | .000 |
| N of Valid Cases | 238 |  |  |
| a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 23.19. | | | |