

WELL-BEING AND COGNITIVE FAILURES: A SURVEY OF NURSES

Dr. Andrew P. Smith*

Centre for Occupational and Health Psychology, School of Psychology, Cardiff University, 63 Park Place, Cardiff CF10 3AS, UK.



*Corresponding Author: Dr. Andrew P. Smith

Centre for Occupational and Health Psychology, School of Psychology, Cardiff University, 63 Park Place, Cardiff CF10 3AS, UK.

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ABSTRACT

Background: There has been little research on the relationship between cognitive failures and emotional well-being, which is surprising as cognitive functioning represents an important part of well-being. Research has shown that both well-being and cognitive failures can be assessed by questionnaire. This was examined in the present study. **Methods:** An online survey was carried out with a sample of one hundred and seventy nurses (age range 19-69, mean age: 40 years; 15 male, 155 female). They answered questions about cognitive failures at work and outside work. They also completed the Well-being Process Questionnaire (WPQ). **Results:** High negative well-being and low positive well-being were associated with more cognitive failures at work and outside work. Regression analyses, including the established predictors of well-being, showed that the associations with negative and positive well-being outcomes were no longer significant. Cognitive failures at work were predicted by high job demands, bullying and frequent use of negative coping. There were no significant predictors of cognitive failures outside of work. **Conclusion:** Initial correlational analyses showed that cognitive failures at work and outside work were associated with high negative well-being and low positive well-being. Analyses including established predictors of well-being showed that job demands, bullying and negative coping predicted cognitive failures at work. There were no significant predictors of cognitive failures outside of work.

KEYWORDS: Well-being; Well-being Process Questionnaire (WPQ); Cognitive Failures; Nurses; Job Demands; Bullying; Negative Coping.

INTRODUCTION

There has been extensive research on well-being, and the well-being process approach.^[1,2] is based on the Demand- Resources- Individual- Effects (DRIVE) model.^[3-6] This model was used in the present research to measure positive and negative well-being outcomes, and their predictors were measured using the Well-being Process Questionnaire (WPQ). This questionnaire has been used in studies of both specific industry sectors and the general working population.^[7-39] This previous research has identified reliable well-being predictors, which were used in the present analyses.

Cognitive failures are problems of memory, attention, and action and can be assessed by questionnaire.^[40-43] Research on predictors of cognitive failures is briefly summarised in the next section. Cognitive failures in the workplace have been investigated.^[44-47] High levels of cognitive failure were associated with a greater risk of injuries and accidents at work. Cognitive failures were also associated with mental health and whether workers were taking psychotropic medication. Other research.^[48] has investigated reported cognitive failures in those who

live in areas with high and low aircraft noise. The results revealed that greater aircraft noise exposure was associated with more frequent cognitive failures. Research.^[49] has also examined associations between cognitive failures and symptom reporting. The results showed that there were significant correlations between cognitive failures and low alertness, somatic symptoms, neuroticism, anxiety, depression, and obsessional symptoms. Other research has investigated factors that are associated with a reduction in cognitive failures. Regular consumption of caffeine has been associated with less frequent cognitive failures, and this was observed in samples of workers,^[50] non-workers,^[51] and the elderly.^[52,53] The aim of the present research was to investigate associations between positive well-being (e.g., positive affect, happiness, and life satisfaction), negative well-being (e.g., anxiety, stress and depression) and frequency of cognitive failures. A second aim was to examine whether any associations between well-being and cognitive failures remained significant when the established predictors of well-being were included in the regression model. The measures of cognitive failures were two questions asking about cognitive failures at

work and outside work. These single questions are highly correlated with the longer cognitive failure scales and have been used in previous studies of risk factors for cognitive failure.^[44-47]

This is the second survey examining associations between well-being and cognitive failures. The first investigated this topic in a sample of university staff.^[28] The results showed that cognitive failures were positively associated with negative well-being and negatively correlated with positive well-being. When established predictors of well-being were included in the regression model, only the effect of negative well-being remained significant. The present study examined whether similar results are observed in the nursing sector.

MATERIALS AND METHODS

The present research had approval from the Ethics Committee, School of Psychology, Cardiff University. The online survey was carried out following the informed consent of the participants.

Participants

An advertisement in the Royal College of Nursing Bulletin was used to recruit the participants. One hundred and seventy nurses (15 male, 155 female; mean age: 40 years; age range 19-69) took part in the study.

a) at work

Not at all Rarely Occasionally Quite Frequently Very Frequently
₀ ₁ ₂ ₃ ₄

b) outside of work

Not at all Rarely Occasionally Quite Frequently Very Frequently
₀ ₁ ₂ ₃ ₄

Analysis

Initial analyses examined the correlations between the positive and negative well-being outcomes and the cognitive failure scores. Regressions then investigated whether associations between the well-being outcomes and the cognitive failure scores were significant when the established predictors were included in the model. A

Participants were from all areas of nursing, including managers, practitioners, and educators. On completion of the survey, the participants were given £10 gift vouchers and entered into a prize draw (3 prizes of £100).

The Survey

The first part of the survey consisted of the WPQ. The following WPQ variables were included in the analyses

- Job demands.
- Bullying
- Job control.
- Psychological capital (optimism, self-esteem, self-efficacy).
- Social support.
- Negative coping (wishful thinking, self-blame).
- Positive coping (problem-solving, seeking support).
- Negative well-being (stress, negative affect, anxiety and depression).
- Positive well-being (happiness, life satisfaction, positive affect).

The cognitive failure questions were

How frequently do you find that you have problems with memory (e.g. forgetting where you put things), attention (e.g. failures of concentration), or action (e.g. doing the wrong thing)?

separate regression analysis was performed for each well-being outcome.

RESULTS

Correlations

Higher negative well-being and lower positive well-being were associated with more frequent cognitive failures both at work and outside work (Table 1).

Table 1: Correlations between well-being outcomes and cognitive failures.

	Positive well-being	Negative well-being
Cognitive failures at work	-0.21 p<0.005	0.21 p<0.005
Cognitive failures outside work	-0.18 p<0.05	0.21 p<0.005

Regressions with established predictors and well-being outcomes as independent variables

In the regression with cognitive failures at work as the dependent variable, positive and negative well-being outcomes were no longer significantly associated when the established predictors of well-being were included in the model. Job demands (std beta = 0.17 t= 2.00 p <0.05), bullying (std beta = 0.19 t= 2.58 p <0.05), and negative coping (std beta = 0.19 t= 2.01 p <0.05) were significant predictors of cognitive problems at work. There were no significant predictors in the regression, with cognitive failures outside work as the dependent variable.

DISCUSSION

The results from the present study showed that negative well-being was related to more frequent cognitive failures at work and outside work, whereas positive well-being was associated with more frequent cognitive failures both at work and outside work. The established predictors of negative well-being predicted cognitive failures at work. High job demands, bullying and negative coping were associated with more frequent cognitive failures at work. Positive and negative well-being outcomes no longer predicted cognitive failures at work when the established predictors were included in the analyses. In the regressions, there were no significant predictors of cognitive failures outside of work. These results confirm previous research showing that job and individual characteristics can influence the frequency of cognitive failures. In the present study, these predictors accounted for associations between well-being outcomes and cognitive failures. The results also show that it is important to ask about the context of the cognitive failures, as there were different results for work and outside work outcomes.

The present study had limitations which should be addressed by further research. First, it was a cross-sectional survey, and future studies should have longitudinal designs and use interventions, in order to get a clearer indication of causality. Secondly, only one sector, namely nursing, was studied, and it is important to determine which results generalise to the working population and which are sample-specific. Cognitive failures cover problems of attention, memory, and action, and it is important to investigate these specific domains rather than using a global measure. There is also a need to examine associations between well-being and both subjective reports and objective measures of cognitive function.

CONCLUSION

Cognitive functioning is included in definitions of well-being and can be assessed by questionnaire. The relationships between positive well-being (positive affect, happiness, and life satisfaction), negative well-being (negative affect, anxiety, stress, and depression)

and the frequency of cognitive failures were examined in the present study. An online survey consisting of questions about cognitive failures at work and the Well-being Process Questionnaire was administered to a sample of nurses. Low positive well-being and high negative well-being were correlated with more frequent cognitive failures both at work and outside work. Regression analyses included the established predictors of well-being and showed that the associations with positive and negative well-being outcomes were no longer significant. Cognitive failures at work were predicted by bullying, high job demands, and frequent use of negative coping. Cognitive failures outside of work were not predicted by well-being outcomes or the established predictors.

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