

A SINGLE ITEM MEASURE OF PSYCHOLOGICAL CAPITAL: ASSOCIATIONS WITH WELL-BEING***Andrew P. Smith and Arwel James**

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ABSTRACT

Background: Psychological capital is a key component of well-being. Many questionnaires measure the components of psychological capital (e.g. optimism, self-esteem and self-efficacy). The present study examined a single question in a sample of secondary school students and compared effects with those seen using the Student Well-being Process Questionnaire (SWPQ) psychological capital scale. **Methods:** Eighty-two secondary school students completed the study, which involved an online survey measuring psychological capital, well-being predictors and outcomes. **Results:** The three psychological capital questions from the SWPQ loaded on a single factor, and a total psychological capital score was used in the analyses. The single item and total psychological capital scores were significantly correlated and showed similar associations with well-being outcomes (positive correlations with positive outcomes and negative associations with negative outcomes). When other established predictors of well-being were included in the analyses, the single-item psychological measure remained significantly associated with flourishing, life satisfaction and perceived stress. **Conclusions:** A single-item psychological capital question was associated with the three-item psychological capital scale from the SWPQ and showed the expected associations with well-being outcomes. This question can now be used in a shorter version of the SWPQ.

KEYWORDS: Well-being; Students; Social support; Stressors; Negative coping; Psychological capital; Perceived stress; Negative well-being; Positive well-being; Life satisfaction; Depression; Flourishing.

INTRODUCTION

Optimism, self-esteem, and self-efficacy measures are key components of Psychological Capital^[1] and good predictors of well-being outcomes. Optimism has been associated with various well-being outcomes, including life satisfaction and happiness.^[2-4] Bandura^[5] suggests that perceived self-inefficacy is the major source of anxiety and the cause of avoidant behaviour. Self-esteem is a vital variable in depression, negative affect, and stress.^[6] Each has also been suggested as a potential buffer against negative well-being outcomes^[6-8] and has been implicated in research on the well-being of teachers^[9] and nurses.^[10] Measures of optimism, self-efficacy, and self-esteem have also been supported in reviews of well-being measures.^[11] In their review of personality variables and their associations with well-being, Deneve and Cooper^[11] conclude that the most important personality variables appear to be those concerned with making healthy attributions. Although not specifically mentioned in their review, self-esteem, optimism, and self-efficacy can theoretically represent

positive attributions related to one's self, future, and abilities.

The Well-being Process Questionnaire^[12,13] was developed from the DRIVE (Demands Resources Individual Effects) stress model.^[14, 15] The Well-being Process model was initially designed for occupational samples^[16-33] and a psychological capital scale was developed based on single items of optimism, self-esteem and self-efficacy. A version of the WPQ was then developed for use with student samples.^[34-55] The Well-being Process Questionnaire (WPQ) included more predictor variables than the DRIVE model (e.g. psychological capital) and more positive outcomes (happiness, life satisfaction and positive affect). Recent studies have generally replicated the effects of the established predictors and added new outcome variables (e.g., flourishing and physical health) and predictors (e.g., workload, work-life balance, flow, and daytime sleepiness). Results obtained from university students have been replicated with samples from a secondary school.^[53-56]

One central approach in developing the WPQ was using short scales or single items to assess the different concepts. This allowed the inclusion of many variables in the questionnaire. The present study aimed to develop a single psychological capital question and examine its associations with the longer measure of the SWPQ and well-being outcomes.

METHODS

Ethical committee approval

The Ethical Committee of the School of Psychology, Cardiff University, approved the study, which was carried out with the participants' informed consent. The volunteers were recruited from a secondary school in South Wales.

Participants

Eighty-two secondary school students (48.2% male; 50% aged 12-13, 50% aged 13-14) completed the survey.

Materials

Participants completed an online survey containing questions about psychological capital, well-being and student lifestyle factors.

Psychological Capital

The original Student WPQ psychological capital measures covered optimism, self-esteem and self-efficacy.

The actual questions were.

Optimism

In general, I feel optimistic about the future (for example, I usually expect the best, I expect more good things to happen to me than bad, and it's easy for me to relax)

Strongly Disagree 1 2 3 4 5 6 7 8 9 10 Strongly Agree

Self-esteem

Overall, I feel that I have positive self-esteem (for example, On the whole, I am satisfied with myself, I can do things as well as most other people, and I feel that I am a person of worth)

Strongly Disagree 1 2 3 4 5 6 7 8 9 10
Strongly Agree

Self-efficacy

I am confident in my ability to solve problems that I might face in life (for example, I can usually handle whatever comes my way, if I try hard enough, I can overcome difficult problems, I can stick to my aims and accomplish my goals)

Strongly Disagree 1 2 3 4 5 6 7 8 9 10
Strongly Agree

Single-item psychological capital question

I am optimistic and confident in my problem-solving ability and generally satisfied with myself.

Strongly Disagree 1 2 3 4 5 6 7 8 9 10
Strongly Agree

Well-being questions.

The Short-form Well-Being Process Questionnaire (SFWPQ) was used. It included questions about the well-being predictors and measures of the well-being outcomes.

Analysis strategy

Factor analyses were carried out on the three psychological capital questions to determine if they loaded on the same factor. If this was the case, a total psychological capital score would be used in the analyses. Correlational analyses examined associations between the total psychological capital score, the single psychological capital item, and the well-being outcomes. Finally, a MANOVA, including the established predictors of well-being, was performed to examine which outcome variables were significantly associated with the single-item psychological capital question.

RESULTS

Factor analysis

The self-esteem, optimism and self-efficacy scores loaded on a single factor, explaining 66.6% of the variance. The Cronbach alpha value for this single psychological capital scale was 0.74. Table 1 shows the correlations between the total psychological capital score, the single-item psychological capital score, and the well-being outcomes. The two psychological capital scores were significantly correlated and associated with the well-being outcomes in the predicted directions (significantly associated with positive outcomes and negatively correlated with negative outcomes). Generally, the single psychological capital question correlated more highly with the outcomes than the total score.

Table 1: Correlations (Pearson r) between the social support scores and well-being outcomes.

	Single-item psychological capital	Total psychological capital score
Total psychological capital score	0.42 p < 0.001	
Positive well-being	0.48 p < 0.001	0.38 p < 0.001
Negative well-being	-0.47 p < 0.001	-0.33 p < 0.001
Perceived stress	-0.51 p < 0.001	-0.21 p < 0.05
Life satisfaction	0.56 p < 0.001	0.42 p < 0.001
Anxiety	-0.45 p < 0.001	-0.40 p < 0.001
Depression	-0.50 p < 0.001	-0.20 p < 0.05
Flourishing	0.54 p < 0.001	0.41 p < 0.001

A MANOVA was then carried out, including all the well-being outcomes, the single-item psychological capital variable, and the established predictors of well-being. This analysis aimed to identify which associations with the psychological capital score remained significant when the established predictors were co-varied.

Psychological capital had a significant overall effect (Wilks Lambda = 0.773 $p < 0.05$). The effects on flourishing, life satisfaction and perceived stress remained significant (all p 's < 0.05).

DISCUSSION

The well-being process model includes both predictors of positive well-being outcomes (e.g. social support) and negative well-being outcomes (e.g., stressors). Some predictors (e.g. psychological capital) are significantly associated with positive and negative outcomes. These predictors and outcomes have been measured using single questions to avoid fatigue when completing the survey. The present study reduced the measurement of psychological capital to a single question. This question was significantly correlated with the original SWPQ psychological capital score based on three questions. The single question was also significantly associated with both positive and negative well-being outcomes. Multivariate analysis showed that the single psychological capital measure was only significantly related to flourishing, life satisfaction and perceived stress when other established predictors (stressors, negative coping and psychological capital) were included in the model. Overall, these results show that psychological capital can be measured with a single question. Using single questions to measure the concepts means that many predictors and outcomes can be included in surveys. Further research is required to determine whether these results from a sample of secondary school students are obtained from different age groups (e.g., university students and workers).

CONCLUSION

Psychological capital consists of concepts such as optimism, self-esteem and self-efficacy and is a key component of well-being. The present study developed a single question measuring psychological capital and compared effects with those seen using the Student Well-being Process Questionnaire (SWPQ) psychological capital scale. Eighty-two secondary school students completed an online survey measuring psychological capital, well-being predictors and outcomes. The three psychological capital questions from the SWPQ were found to load on a single factor; therefore, a total psychological capital score was used in the analyses. The single item and total psychological capital scores were highly correlated and showed similar associations with well-being outcomes (positive associations with positive outcomes and negative correlations with negative outcomes). When other established predictors of well-being were included as covariates in the analyses, the single-item psychological measure remained significantly associated with flourishing, life satisfaction and perceived stress. In summary, a single-item psychological capital question was associated with the three-item psychological capital scale from the SWPQ and showed the expected associations with well-being outcomes. This question can now be used in shorter versions of the SWPQ.

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