Psychology, 2014, 5, 500-513
Published Online April 2014 in SciRes. http://www.scirp.org/journal/psych
http://dx.doi.org/10.4236/psych.2014.56060

Scientific Research

Assessing Employee Wellbeing in Schools Using a Multifaceted Approach: Associations with Physical Health, Life Satisfaction, and Professional Thriving

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Received 20 February 2014; revised 21 March 2014; accepted 15 April 2014

Abstract

Purpose: Drawing on recent advances in the field of positive psychology, we conducted a pilot evaluation of employee wellbeing using Seligman's (2011) multidimensional PERMA (positive emotion, engagement, relationships, meaning, and accomplishment) model of flourishing. We analyzed associations between multiple aspects of employee wellbeing and three outcomes: physical health, life satisfaction, and professional thriving. Method: Employees (*N* = 153) from a large private school in Australia completed a survey with items theoretically relevant to the PERMA theory. Factor analyses recovered the expected five PERMA components and a negative emotion factor. Regression analyses estimated cross-sectional associations between the wellbeing factors and self-reported physical health, life satisfaction, and professional thriving (job satisfaction and organizational commitment). Results: Differential associations support the multidimensional approach to defining and measuring wellbeing. For example, staff with higher engagement and better relationships reported greater job satisfaction and organizational commitment. Conclusions: Multidimensional wellbeing assessments can help school administrators understand and improve staff wellbeing, supporting policy and practice designs that ultimately will promote wellness for all stakeholders in the education system.

Keywords

Wellbeing, Positive Psychology, Measurement, Psychosocial Context, Positive Education

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How to cite this paper: Kern, M. L., et al. (2014). Assessing Employee Wellbeing in Schools Using a Multifaceted Approach: Associations with Physical Health, Life Satisfaction, and Professional Thriving. *Psychology, 5,* 500-513.
http://dx.doi.org/10.4236/psych.2014.56060

1. Introduction

Positive psychology (PP) is a scientific field that studies the optimal functioning of individuals, groups, and institutions (Gable & Haidt, 2005). Since its inception, the field has grown rapidly, with a large volume of peer reviewed publications and an expanding reach beyond the field of psychology to disciplines such as education and organizational behavior (Rusk & Waters, 2013). The current pilot study examines the relation between employee wellbeing, physical health, life satisfaction, and professional thriving (job satisfaction and organizational commitment) in school staff. Specifically, we approach employee wellbeing from a positive psychology framework, adopting Seligman's (2011) multidimensional PERMA model of flourishing, in which wellbeing is defined in terms of five domains: positive emotions, engagement, relationships, meaning, and accomplishment.

Teacher wellbeing has been a longstanding topic of research interest. However, studies have primarily focused on problems faced by employees and illbeing, more so than it has focused on employee strengths and wellbeing (Calabrese, Hester, Friesen, & Burkhalter, 2010; Hoy & Tarter, 2011). For example, three decades of research has been devoted to the study of teacher stress (Chaplain, 2008; Howard & Johnson, 2004). Other prominent topics of study related to teacher wellbeing include anxiety, depression, frustration, and burnout (e.g., Chan, 2011; Kyriacou 2001).

Although studying teacher illbeing has been informative, it has not given us a comprehensive understanding of teacher wellbeing. Indeed, a positive psychology approach suggests that mental health ranges from extremely negative to extremely positive (Huppert & So, 2013; Keyes, 2002). The traditional approach of measuring teacher wellbeing from a problem-based standpoint (e.g., reducing teacher stress or job dissatisfaction) has ignored the positive end of this spectrum. Positive functioning is not simply surviving stress; it also entails thriving physically, mentally, socially, and professionally. Clearly, negative outcomes should be monitored and reduced. However, Peterson and Park (2003) aptly note, "if our interest is in the good life, we must look explicitly at indices of human thriving" (p. 144). Hoy and Tarter (2011) argue that positive psychology can provide a "fresh lens" through which educational staff wellbeing can be built. Similarly, Duckworth, Quinn and Seligman (2009) suggest that "positive traits that buffer against adversity might contribute to teacher effectiveness" (p. 540).

Beyond positive versus negative sides of mental health, positive psychologists have recently attempted to better delineate the theoretical framework of wellbeing. Several theorists have argued that wellbeing is best characterized as a profile of indicators across multiple domains (Forgeard, Jayawickreme, Kern, & Seligman, 2011; Stiglitz, Sen, & Fitoussi, 2009). For example, as noted above, Seligman (2011) suggests five components. Similarly, Ryff and Keyes (1995) suggest six domains and Huppert and So (2013) include 10 flourishing items.

In this paper, we build upon Seligman's (2011) PERMA model as an organizing framework for measuring workplace wellbeing. The field of positive organizational scholarship has placed strong emphasis on the research and application of employee wellbeing (Cameron, 2003; Dutton, & Sonenshein, 2007), and we draw this literature into the PERMA model. Positive and negative emotions are included in every major model and measure of subjective wellbeing, and range from negative to positive and from low arousal (e.g., relaxed, calm) to high arousal (e.g., excited, enthusiastic). Although the PERMA model focuses on positive emotion, we also include negative emotion to capture both positive and negative sides of the mental health spectrum. Work engagement is characterized by vigor toward tasks, dedication to the work and organization, and absorption (Schaufeli, Salanova, González-Romá, & Bakker, 2002). Engagement is an area of prime interest for educational administration and organizational psychology, as it is seen as the antithesis of burnout. Cameron and colleagues' (2011) organizational virtue model, which includes positive workplace practices such as caring, compassionate support, forgiveness, and respect, speaks to coworker relationships and the interpersonal culture of a workplace as a whole. Since the 1960s, research has suggested that people function best in both personal and work lives when they have a sense of meaning or purpose, defined in terms of having a direction, connecting to something larger than oneself, and feeling that what one does is valuable (Steger, 2012). Finally, accomplishment is often objectively defined in terms of awards, earnings, and prestige, but also entails a subjective feeling of mastery and daily achievement, which we focus on here.

In this pilot study, we explore the PERMA framework in relation to three employee outcomes: physical health, life satisfaction, and professional thriving, assessed in terms of subjective job satisfaction and organizational commitment. Numerous reviews and meta-analyses indicate that wellbeing, broadly construed, relates to posi-

tive physical, life, and professional outcomes (e.g., Cotton & Hart, 2003; Cropanzano & Wright, 2001; Howell, Kern, & Lyubomirsky, 2007; Judge, Thoresen, Bono, & Patton, 2001; Lyubomirsky, King, & Diener, 2005; Wright & Cropanzano, 2004). Prior research has generally lumped wellbeing constructs together, but there is some indication that different aspects of wellbeing relate distinctly to outcomes. For example, a review of positive psychological wellbeing and cardiovascular disease suggested that optimism and emotional vitality related to lower disease risk, whereas positive emotion did not (Boehm & Kubzansky, in press). Studies have reliably found different associations for negative versus positive variables, but Diener and Chan (2011) explicitly noted that different types of wellbeing "have not been clearly differentiated or measured in most research" (p. 26), making it impossible to know what is most beneficial for health and other outcomes.

The aim of this study was to investigate the effects of a multidimensional measure of educational staff wellbeing on physical health, life satisfaction, job satisfaction, and organizational commitment. Applying a multidimensional model of wellbeing such as the PERMA model is important for understanding which aspects of wellbeing are most relevant for different outcomes. To date, there has been no study that has simultaneously tested all five elements of PERMA in employees. Due to the lack of differentiation in existing literature, the unique contribution of each PERMA component is unknown. Thus, we did not make specific hypotheses about the exact pattern of associations between the PERMA factors and health, life, and job outcomes, but begin to build the foundation for such differentiated perspectives. More specifically, using PERMA as a measurement framework, the study was guided by two exploratory research questions:

1) Does wellbeing add predictive variance to physical health, life satisfaction, job satisfaction, and organizational commitment, beyond the effect of negative emotion?

2) Are the PERMA factors differentially related to staff outcomes? Are some aspects of PERMA more strongly related to professional outcomes (job satisfaction and organizational commitment) compared to non-work outcomes (physical health and life satisfaction)?

2. Method

2.1. Participants

Employees at St Peter's College, Adelaide, Australia were invited by email to complete an anonymous online assessment using Survey Monkey software. Responses were received from 153 staff members, with 148 complete responses (73 male, 74 female, 6 unknown).Sixty percent of the participants were teaching staff (i.e., junior and senior school teachers) and 40% were non-teaching teaching (e.g., administrative staff, information technology staff, grounds staff, catering staff). The average length of tenure at the school was seven years, and the age range was 28 to 65 years old.

2.2. Measures

The current study used data from a larger study of students and staff, which included an extensive staff survey. The survey included numerous items, scales, and measures relevant to the PERMA constructs. For the current study, we selected four existing scales and several additional items that theoretically aligned with the five PERMA components. Scales included 20 emotions from the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988); the 17-item Utrecht Work Engagement Scale (Schaufeli et al., 2002); the 29-item Organizational Virtuousness Scale (Cameron et al., 2011); the presence of meaning subscale from the Meaning in Life Questionnaire (Steger, Frazier, Oishi, & Kaler, 2006); and 10 miscellaneous items relevant to subjective accomplishment (see Appendix for full item set).

For outcomes, we included measures of physical health, life satisfaction, job satisfaction, and organizational commitment. Participants rated their self-perceived health and physical vitality (6 items, α= .80), and somatic symptoms (7 items, α = .66). Life satisfaction was assessed with the five-item Satisfaction with Life Scale (α = .89; Diener, Emmons, Larsen, & Griffin, 1985). Job satisfaction was assessed through four items from the Index of Job Satisfaction (α = .89; Brayfield & Rothe, 1951). Organizational commitment was assessed through the Organizational Commitment Scale (9 items, α = .88; Mowday, Steers, & Porter, 1979). Higher values indicate more of eachoutcome (i.e., greater vitality, more somatic symptoms, higher life or job satisfaction, greater organizational commitment).

3. Results

3.1. Establishing a Multidimensional Wellbeing Measurement Model

First, we used exploratory and confirmatory factor analyses to examine whether the five PERMA factors were present. Before beginning analysis, we randomly split the sample into two sets: a development set (n = 75) to create the factor model, and a test set (n = 78) to test the structure.

We began with the development set. As we had a limited sample size, we first reduced the number of items entering the factor model for each domain. For emotion, an exploratory principle components analysis with oblimin rotation ($\Delta = 0$) with the 20 PANAS items indicated two clear factors: positive and negative emotion. We retained the six highest loading items on each factor (positive emotion: $\alpha = .88$; negative emotion: $\alpha = .89$). We extracted the first principle component factors and retained the six highest loading items from the 17-item Ultrecht Work Engagement Scale for engagement ($\alpha = .89$) and from the 29 items from the Organizational Virtuousness Scale for relationships ($\alpha = .97$). We retained all five items from the presence of meaning subscale of the Meaning in Life Questionnaire ($\alpha = .89$). For accomplishment, we extracted the first principle component factor from 10 miscellaneous survey items (see Appendix), and retained the highest seven items ($\alpha = .86$)[1].

Through this process, we reduced the number of items entering the combined factor analysis to 36 items and six factors (Positive emotion: 6 items, Engagement: 6 items, Relationships: 6 items, Meaning: 5 items, Accomplishment: 7 items, Negative emotion: 6 items). We then performed a principal components analysis with direct oblimin rotation with the 36 items. The Kaiser criterion (Eigenvalues < 1.00), scree plot, and Velicer's (1976) minimal average partial (MAP) test all indicated a six-factor solution, and items loaded on the expected factors.

Using the test set, we then examined the final factor structure with a confirmatory factor analysis using the lavaan package (version .5 - 12, Rosseel, 2012) in R (version 2.15.2). Model fit was evaluated using the root mean square error of approximation (RMSEA), the Standardized Root Mean Residual (SRMR), the Comparative Fit Index (CFI) and the Tucker Lewis Index (TLI). The model exhibited acceptable fit to the data (RMSEA = .07, 90% confidence interval [CI] = .06, .09], SRMR = .08, CFI = .87, TLI = .86)[2]. Finally, we combined the development and test samples and estimated a final factor model, which demonstrated good fit to the data (RMSEA = .06 [90% CI = .05, .06], SRMR = .06, CFI = .93, TLI = .92). Final items, latent factor loadings, and factor reliabilities in the full sample are summarized in **Table 1**. The items were averaged to create composite wellbeing factors.

3.2. Associations with Health, Life, and Work Outcomes

With the wellbeing factors established, we then tested cross-sectional associations with five outcomes: health/vitality, somatic symptoms, life satisfaction, job satisfaction, and organizational commitment. Descriptives and variable correlations with the wellbeing factors are summarized in **Table 2**. The wellbeing components were significantly related (positively for the five PERMA domains; negatively for negative emotion) to health (health/vitality), life (life satisfaction), and job (job satisfaction, organizational commitment) outcomes, with inverse associations for somatic symptoms. Positive emotion, meaning, and accomplishment were most strongly related to health and life satisfaction, whereas engagement and relationships related most strongly to job satisfaction and organizational commitment.

We then examined the unique prediction of each factor using hierarchical linear regression with simultaneous entry, predicting each outcome from the wellbeing factors and controlling for gender. Results are summarized in **Table 3**. The wellbeing factors were most relevant to job and life outcomes, explaining 58.6% of the variance in job satisfaction, 40.6% of the variance in organizational commitment, and 42.3% of the variance in life satisfaction. Meaning was the strongest predictor of life satisfaction, workplace engagement and coworker relationships were most important for job satisfaction and commitment, and accomplishment was most important for health/vitality. Negative emotions also remained significantly related to lower job and life satisfaction.

To demonstrate the added value of the profile approach to wellbeing compared to using a single number, **Figure 1** compares the wellbeing profiles for staff members in the lowest quartile compared to the highest

[1]Six items provided high reliability while reducing the number of items overall. For accomplishment, an additional item substantially improved reliability and thus was retained.

[2]An RMSEA of .06 or lower and a SRMR of .09 or lower are considered acceptable; for the CFI and TLI, values above .90 are preferred (Hu & Bentler, 1999). However, with such a small sample, good fit would be hard to achieve.

Table 1. Final items and latent factor loadings for the wellbeing factors.

Factor/item	λ	α
Positive Emotion		.86
Determined	.77	
Interested	.77	
Enthusiastic	.80	
Inspired	.67	
Active	.66	
Alert	.62	
Engagement		.89
I am enthusiastic about my job.	.87	
I am proud on the work that I do.	.75	
I find the work that I do full of meaning and purpose.	.74	
My job inspires me.	.79	
At my work, I feel bursting with energy.	.67	
At my job I feel strong and vigorous.	.75	
Relationships		.97
We provide emotional support to each other.	.95	
We show kindness to one another.	.94	
We genuinely care about each other.	.86	
We show compassion for each other.	.96	
We care for fellow employees who are struggling.	.93	
We build strong interpersonal relationships.	.91	
Meaning		.89
My life has a clear sense of purpose.	.90	
I have a good sense of what makes my life meaningful.	.77	
I have discovered a satisfying life purpose.	.84	
I understand my life's meaning.	.78	
My life has no clear purpose. (Reversed)	.68	
Accomplishment		.82
I think I am doing pretty well.	.68	
How often do you feel you are making progress towards accomplishing your goals?	.68	
Most days I feel a sense of accomplishment from what I do.	.69	
I am competent and capable in the activities that are important to me.	.53	
I am doing just as well as my peers.	.57	
I am competent and capable in my daily activities.	.58	
Most days I feel a sense of accomplishment from what I do.	.73	
Negative Emotions		.87
Afraid	.83	
Scared	.78	
Nervous	.74	
Distressed	.70	
Upset	.62	
Jittery	.67	

Table 2. Final wellbeing factors and outcome descriptives and correlations.

Variable	N	Mean	SD	Min	Max	P	E	R	M	A	N
Positive Emotion	147	4.04	0.48	2.50	5.00	1.00					
Work Engagement	148	3.12	0.48	1.17	4.00	.66**	1.00				
Coworker Relationships	149	5.23	1.31	1.00	7.00	.34**	.45**	1.00			
Meaning	147	5.60	0.93	3.00	7.00	.56**	.46**	.21*	1.00		
Accomplishment	151	3.78	0.71	1.00	4.99	.69**	.68**	.37**	.57**	1.00	
Negative Emotion	147	2.25	0.61	1.00	4.17	−.29**	−.41**	−.28**	−.28**	−.51**	1.00
Gender	147	1.50	0.50	1.00	2.00	−.16	−.09	−.16	−.15	−.12	.004
Physical Health/ Vitality	143	4.50	0.91	1.83	6.40	.42**	.33**	.20*	.33**	.47**	−.26**
Somatic Symptoms	143	1.65	0.56	1.00	3.86	−.23**	−.26**	−.13	−.22**	−.25**	.13
Life Satisfaction	147	3.72	0.71	1.00	5.00	.42**	.33**	.20*	.59**	.51**	−.39**
Job Satisfaction	148	4.03	0.70	1.00	5.00	.49**	.71**	.54**	.39**	.55**	−.44**
Organization Commitment	146	3.96	0.64	1.67	5.00	.40**	.55**	.52**	.30**	.42**	−.33**

Note: *$p < .05$, **$p < .01$.

Table 3. Regression analyses predicting life, health, and job outcomes from the wellbeing factors.

	β	SE	t		β	SE	t
Health/Vitality		$R^2 = .245$**		Job Satisfaction		$R^2 = .586$**	
Positive Emotion	0.20	0.22	1.78	Positive Emotion	−0.03	0.12	−0.35
Work Engagement	−0.05	0.21	−0.45	Work Engagement	0.49	0.12	6.02**
Coworker Relations	0.02	0.06	0.24	Coworker Relations	0.28	0.03	4.48**
Meaning	0.06	0.09	0.66	Meaning	0.06	0.05	0.84
Accomplishment	0.31	0.16	2.50*	Accomplishment	0.05	0.09	0.49
Negative Emotion	−0.04	0.13	−0.41	Negative Emotion	−0.13	0.08	−1.99*
Gender	0.03	0.14	0.44	Gender	0.05	0.08	0.82
Somatic Symptoms		$R^2 = .102$*		Organizational Commitment		$R^2 = .406$**	
Positive Emotion	−0.05	0.15	−0.42	Positive Emotion	0.02	0.14	0.21
Work Engagement	−0.12	0.14	−1.00	Work Engagement	0.33	0.13	3.39**
Coworker Relations	−0.03	0.04	−0.29	Coworker Relations	0.35	0.04	4.59**
Meaning	−0.10	0.06	−0.97	Meaning	0.06	0.06	0.70
Accomplishment	−0.10	0.11	−0.71	Accomplishment	−0.03	0.10	−0.26
Negative Emotion	−0.02	0.09	−0.15	Negative Emotion	−0.10	0.08	−1.25
Gender	−0.13	0.09	−1.54	Gender	0.03	0.09	0.48
Life Satisfaction		$R^2 = .423$**					
Positive Emotion	0.07	0.15	0.68				
Work Engagement	−0.14	0.15	−1.42				
Coworker Relations	0.03	0.04	0.42				
Meaning	0.46	0.06	5.53**				
Accomplishment	0.18	0.11	1.70				
Negative Emotion	−0.20	0.09	−2.52*				
Gender	0.05	0.10	0.77				

Note: *$p < .05$, **$p < .01$.

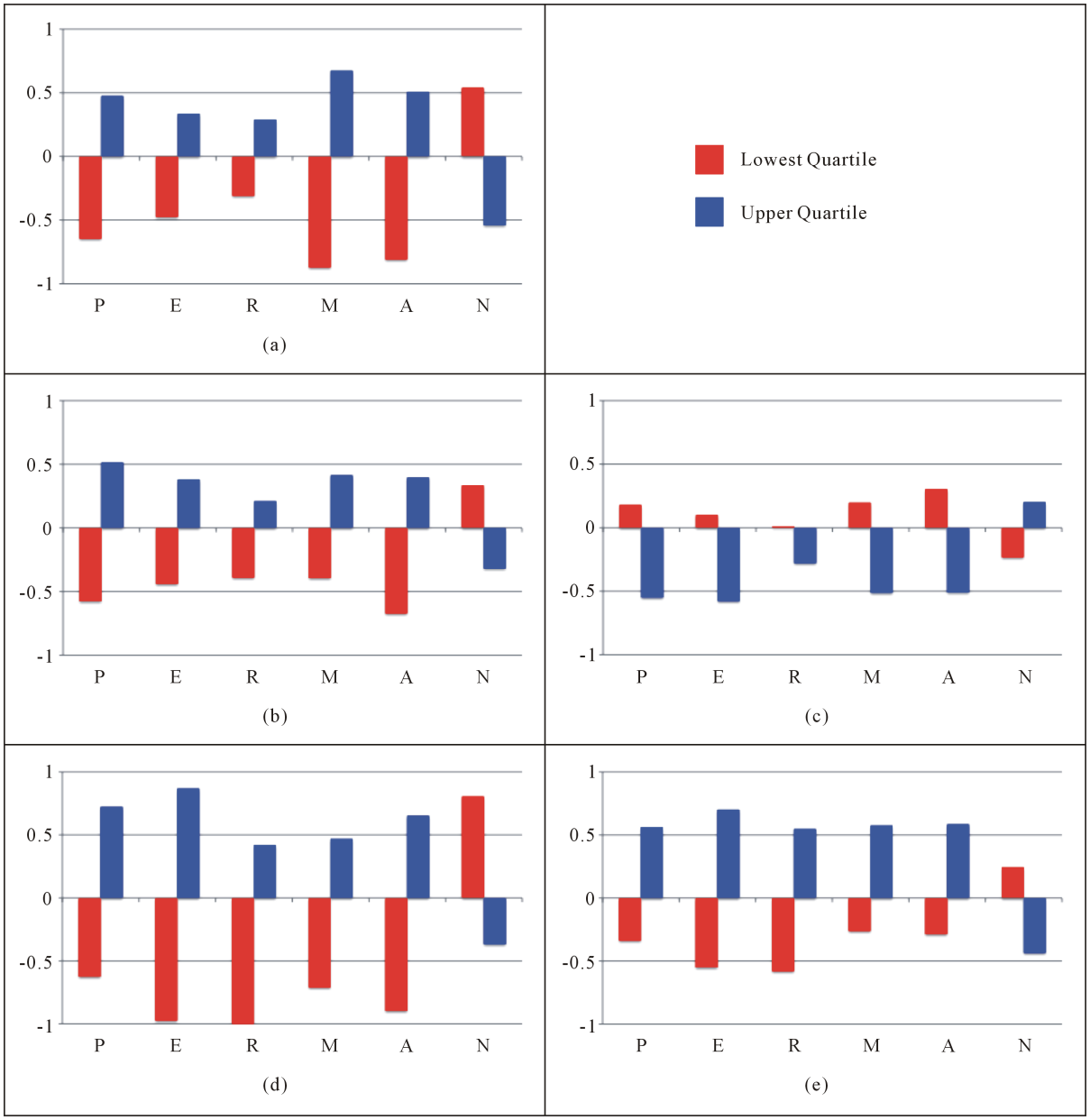

Figure 1. Profiles comparing staff members in the highest versus lowest quartile for each outcome. (a) Life satisfaction; (b) Health/vitality; (c) Somatic symptoms; (d) Job satisfaction; (e) Organizational commitment. Note: Mean values for each scale are Z scored for comparison. All differences are significant ($p < .05$). P = positive emotion, E = work engagement, R = coworker relationships, M = meaning, A = accomplishment, N = negative emotion.

quartile for each outcome. Although the high group is clearly higher on each domain (with an inverse pattern for negative emotion), different profiles of PERMA factors distinguish each outcome.

4. Discussion

Hoy and Tarter (2011) argue that studying the wellbeing of school staff from a positive psychology perspective will add significantly to the literature, which traditionally has focused more on how to ameliorate negative states (e.g. reducing stress) rather than promote positive states (e.g., increasing PERMA). In this exploratory study, we applied Seligman's (2011) multidimensional wellbeing framework, which directly focuses on the positive side of human function, and examined associations with health, life, and job outcomes. Our approach supports the

field of Positive Organizational Scholarship, which has become interested in the theory and measurement of employee flourishing (Cameron, 2003).

Using the PERMA framework as our conceptual basis, the results of this study demonstrated that when staff members are doing well across multiple wellbeing domains, they also are more committed to the school, and more satisfied with their health, life, and jobs.

We successfully found evidence for six separate yet correlated factors, and subsequently explored two questions. First, we examined the extent to which positive psychological factors relate to important life outcomes beyond negative affect. Studies have primarily examined associations of negative psychological factors, such as hostility, anxiety, depression, and stress. If wellbeing is simply the lack of these negative psychological factors, then including separate measures of wellbeing is unnecessary. Yet aligned with a growing body of studies (e.g., Boehm & Kubzansky, in press; Howell et al., 2007), the wellbeing factors predicted health, life, and job outcomes, independently of negative emotion. From the inception of the field, positive psychology theorists have noted that wellbeing is not simply the absence of negative function; our findings add empirical evidence to this claim.

Although growing evidence supports positive associations between wellbeing and physical health, the type of wellbeing may matter, and few studies simultaneously compare multiple aspects (Boehm & Kubzansky, in press). Our second question asked whether a multidimensional assessment of wellbeing provides more specific information to predict different types of employee outcomes. Positive emotion, meaning, and accomplishment were most strongly related to life satisfaction and health, whereas engagement and relationships related most strongly to job satisfaction and organizational commitment. Although exploratory, our findings begin to build the picture of how different aspects of wellbeing differentially relate to outcomes.

4.1. Implications

This is the first study to systematically and empirically apply the multidimensional PERMA model to school staff wellbeing, and to investigate differential associations with self-reported life satisfaction, physical health, job satisfaction, and organizational commitment. There is both theoretical and practical value to measuring and reporting wellbeing as a profile of responses, rather than as a single “overall wellbeing” score. On the theoretical side, modern theories of wellbeing and flourishing are multidimensional in nature, and any composite metric obscures the multidimensionality of both the theories and the measures themselves. Practically, a single wellbeing metric gives little guidance as to how to proceed. If wellbeing is low, we can give various general interventions, which often focus on building temporary positive emotions and reducing negative emotions. In our study, engagement and coworker relationships were the most important variables for predicting professional outcomes such as job satisfaction and commitment to the organization. In contrast, non-work outcomes such as physical health and life satisfaction were more heavily influenced by positive emotion than by engagement and co-worker relationships. Thus, testing the differentiated patterns of a multidimensional scale of wellbeing allows for more tailored approaches to promote wellbeing in school staff.

How can staff wellbeing be supported and cultivated? It is important that school administrators set clear goals that are aligned to the PERMA principles, and then directly incorporate these goals into policies and practices throughout their schools. For instance, training in positive psychology theory and practice can be provided to staff members. A wellbeing interest group that discusses evidence-based articles can be created. Staff meetings can commence by reviewing what is working well in teams and discussing how teams can achieve more. Behavioral codes of conduct can be aligned with wellbeing principles. And returning to the value of a multidimensional assessment of wellbeing, appraisal documentation can include wellbeing measures that document changes and improvements in emotion, engagement, relationships, meaning, and accomplishment over time.

4.2. Limitations

Several limitations to the study must be acknowledged. First, we structured our measures and analyses around Seligman’s (2011) PERMA model by conducting a factor analysis of the five factors from a series of other well-established measures. Additional development work would be needed to fully develop a measure of workplace PERMA. Second, we reported cross-sectional self-reported data. Future assessments will benefit from linking staff reports to objective outcomes, such as health records, absenteeism, and performance. It will be valuable to track wellbeing over time, monitoring changes in wellbeing with different policy or practice changes. Third, the

sample came from a single school, which was a private boys school in Australia. Future research using the multidimensional approach to staff wellbeing should seek to extend sample sizes and demographics.

5. Conclusion

Schools play a critical socialization role in establishing and maintaining positive cultural values both for students and for staff. Teachers are often "measured" by the grades their students achieve. We suggest that the subjective wellbeing of school staff also needs to be an important measure taken by schools. By assessing staff perspectives of wellbeing across multiple domains, there is potential to change the focus and conversation toward wellness promotion for *all* stakeholders in the education system.

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Appendix: Original Items and Sources

Scale/Item	Response options	Final
Emotion: Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988)		
To what extent do you generally feel this way: Interested	1 = never, 5 = always	P
To what extent do you generally feel this way: Distressed	1 = never, 5 = always	N
To what extent do you generally feel this way: Excited	1 = never, 5 = always	
To what extent do you generally feel this way: Upset	1 = never, 5 = always	N
To what extent do you generally feel this way: Strong	1 = never, 5 = always	
To what extent do you generally feel this way: Guilty	1 = never, 5 = always	
To what extent do you generally feel this way: Scared	1 = never, 5 = always	N
To what extent do you generally feel this way: Hostile	1 = never, 5 = always	
To what extent do you generally feel this way: Enthusiastic	1 = never, 5 = always	P
To what extent do you generally feel this way: Proud	1 = never, 5 = always	
To what extent do you generally feel this way: Irritable	1 = never, 5 = always	
To what extent do you generally feel this way: Alert	1 = never, 5 = always	P
To what extent do you generally feel this way: Ashamed	1 = never, 5 = always	
To what extent do you generally feel this way: Inspired	1 = never, 5 = always	P
To what extent do you generally feel this way: Nervous	1 = never, 5 = always	N
To what extent do you generally feel this way: Determined	1 = never, 5 = always	P
To what extent do you generally feel this way: Attentive	1 = never, 5 = always	
To what extent do you generally feel this way: Jittery	1 = never, 5 = always	N
To what extent do you generally feel this way: Active	1 = never, 5 = always	P
To what extent do you generally feel this way: Afraid	1 = never, 5 = always	N
Engagement: Ultrecht Work Engagement Scale (Schaufeli, Salanova, González-Romá, & Bakker, 2002)		
When I get up in the morning, I feel like going to work.	1 = strongly disagree, 4 = strongly agree	E
At my work, I feel bursting with energy.	1 = strongly disagree, 4 = strongly agree	
At my work I always persevere, even when things do not go well.	1 = strongly disagree, 4 = strongly agree	
I can continue working for very long periods at a time.	1 = strongly disagree, 4 = strongly agree	
At my job, I am very resilient, mentally.	1 = strongly disagree, 4 = strongly agree	
At my job I feel strong and vigorous.	1 = strongly disagree, 4 = strongly agree	E
To me, my job is challenging.	1 = strongly disagree, 4 = strongly agree	
My job inspires me.	1 = strongly disagree, 4 = strongly agree	E
I am enthusiastic about my job.	1 = strongly disagree, 4 = strongly agree	E
I am proud on the work that I do.	1 = strongly disagree, 4 = strongly agree	E
I find the work that I do full of meaning and purpose.	1 = strongly disagree, 4 = strongly agree	E
When I am working, I forget everything else around me.	1 = strongly disagree, 4 = strongly agree	
Time flies when I am working.	1 = strongly disagree, 4 = strongly agree	
I get carried away when I am working.	1 = strongly disagree, 4 = strongly agree	
It is difficult to detach myself from my job.	1 = strongly disagree, 4 = strongly agree	
I am immersed in my work.	1 = strongly disagree, 4 = strongly agree	
I feel happy when I am working intensely.	1 = strongly disagree, 4 = strongly agree	

Continued

Relationships: Organizational Virtuousness Scale (Cameron, Mora, Leutscher, & Calarco, 2011)		
We treat each other with respect.	1 = not at all characteristic; 7 = completely characteristic	
We trust one another.	1 = not at all characteristic; 7 = completely characteristic	
We demonstrate integrity.	1 = not at all characteristic; 7 = completely characteristic	
We foster dignity in each other.	1 = not at all characteristic; 7 = completely characteristic	
We display confidence in one another.	1 = not at all characteristic; 7 = completely characteristic	
We show appreciation for one another.	1 = not at all characteristic; 7 = completely characteristic	
We express gratitude to each other.	1 = not at all characteristic; 7 = completely characteristic	
We help people who are facing difficulty.	1 = not at all characteristic; 7 = completely characteristic	
We care for fellow employees who are struggling.	1 = not at all characteristic; 7 = completely characteristic	R
We provide emotional support to each other.	1 = not at all characteristic; 7 = completely characteristic	R
We show compassion for each other.	1 = not at all characteristic; 7 = completely characteristic	R
We build strong interpersonal relationships.	1 = not at all characteristic; 7 = completely characteristic	R
We show kindness to one another.	1 = not at all characteristic; 7 = completely characteristic	R
We honor one another's talents.	1 = not at all characteristic; 7 = completely characteristic	
We are interested in each other.	1 = not at all characteristic; 7 = completely characteristic	
We think of each other as friends.	1 = not at all characteristic; 7 = completely characteristic	
We genuinely care about each other.	1 = not at all characteristic; 7 = completely characteristic	R
We are responsive to each other.	1 = not at all characteristic; 7 = completely characteristic	
We are being elevated by our work.	1 = not at all characteristic; 7 = completely characteristic	
We are being renewed by what we do.	1 = not at all characteristic; 7 = completely characteristic	
We feel that our work has profound meaning.	1 = not at all characteristic; 7 = completely characteristic	
We find our work motivating.	1 = not at all characteristic; 7 = completely characteristic	
We see the larger purpose in our work.	1 = not at all characteristic; 7 = completely characteristic	
We share enthusiasm with one another.	1 = not at all characteristic; 7 = completely characteristic	
We inspire each other.	1 = not at all characteristic; 7 = completely characteristic	
We communicate the good we see in one another.	1 = not at all characteristic; 7 = completely characteristic	
We do not blame one other when mistakes are made.	1 = not at all characteristic; 7 = completely characteristic	
We correct errors without placing blame.	1 = not at all characteristic; 7 = completely characteristic	
We forgive mistakes.	1 = not at all characteristic; 7 = completely characteristic	
Meaning: Meaning in Life Questionnaire: Presence subscale (Steger, Frazier, Oishi, & Kaler, 2006)		
I understand my life's meaning.	1 = absolutely untrue; 7 = absolutely true	M
My life has a clear sense of purpose.	1 = absolutely untrue; 7 = absolutely true	M
I have a good sense of what makes my life meaningful.	1 = absolutely untrue; 7 = absolutely true	M
I have discovered a satisfying life purpose.	1 = absolutely untrue; 7 = absolutely true	M
My life has no clear purpose.	1 = absolutely untrue; 7 = absolutely true	M
Accomplishment: Miscellaneous Items		
I think I am doing pretty well.	1 = not at all, 5 = very much	A
I am doing just as well as my peers.	1 = not at all, 5 = very much	A

Continued

Even when others want to quit, I know that I can find ways to solve the problem.	1 = not at all, 5 = very much	
I have so much in life to be thankful for.	1 = not at all, 5 = very much	
If I had to list everything that I felt grateful for, it would be a very long list.	1 = not at all, 5 = very much	
I am competent and capable in my daily activities.	1 = never, 5 = always	A
Most days I feel a sense of accomplishment from what I do.	1 = never, 5 = always	A
How much of the time do you feel you are making progress towards accomplishing your goals?	1 = never, 7 = always	A
Most days I feel a sense of accomplishment from what I do.	1 = strongly disagree, 6 = strongly agree	A
I am competent and capable in the activities that are important to me.	1 = strongly disagree, 6 = strongly agree	A
Health and Vitality (miscellaneous items)		
In general, how is your health?	1 = very bad, 7 = very good	
Compared to two weeks ago, how do you feel now?	1 = much worse, 7 = much better	
How physically fit do you feel?	1 = not at all; 7 = extremely	
How satisfied are you with your current physical health?	1 = not at all; 7 = extremely	
How often have you felt rested when you woke up in the morning?	1 = never, 7 = always	
How often have you felt full of energy?	1 = never, 7 = always	
Somatic Symptoms		
In the past two weeks, how often had you had: Cough	1 = never, 7 = always	
In the past two weeks, how often had you had: Pain (headache, stomachache, muscle pain)	1 = never, 7 = always	
In the past two weeks, how often had you had: Chest tightness or trouble breathing	1 = never, 7 = always	
In the past two weeks, how often had you had: Felt weak, dizzy, or faint	1 = never, 7 = always	
In the past two weeks, how often had you had: Trouble moving around	1 = never, 7 = always	
In the past two weeks, how often had you had: Cold/flu symptoms	1 = never, 7 = always	
In the past two weeks, how often had you had: Other health problems	1 = never, 7 = always	
Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985)		
In most ways my life is close to my ideal.	1 = strongly disagree, 5 = strongly agree	
The conditions of my life are excellent.	1 = strongly disagree, 5 = strongly agree	
I am satisfied with my life.	1 = strongly disagree, 5 = strongly agree	
So far I have the important things I want in life.	1 = strongly disagree, 5 = strongly agree	
If I could live my life over, I would change almost nothing.	1 = strongly disagree, 5 = strongly agree	
Index of Job Satisfaction (partial scale; Brayfield & Rothe, 1951)		
I find real enjoyment in my job at St Peter's College	1 = strongly disagree, 5 = strongly agree	
I like my job better than the average person does	1 = strongly disagree, 5 = strongly agree	
Most days I am enthusiastic about my job at St Peter's College	1 = strongly disagree, 5 = strongly agree	
I feel fairly well satisfied with my job at St Peter's College	1 = strongly disagree, 5 = strongly agree	

Continued

Organizational Commitment Scale (Mowday, Steers, & Porter, 1979)	
I am willing to put in a great deal of effort beyond that normally expected in order to help St Peter's College be successful.	1 = strongly disagree, 5 = strongly agree
I talk up St Peter's College to my friends as a great School to work for.	1 = strongly disagree, 5 = strongly agree
I would accept almost any type of job assignment in order to keep working for St Peter's College.	1 = strongly disagree, 5 = strongly agree
I find that my values and St Peter's College's values are very similar.	1 = strongly disagree, 5 = strongly agree
I am proud to tell others that I am part of St Peter's College.	1 = strongly disagree, 5 = strongly agree
St Peter's College really inspires the very best in me in the way of job performance.	1 = strongly disagree, 5 = strongly agree
I am extremely glad that I chose St Peter's College to work for over others I was considering at the time I joined.	1 = strongly disagree, 5 = strongly agree
I really care about the fate of St Peter's College.	1 = strongly disagree, 5 = strongly agree
For me, this is the best of all possible school's for which to work.	1 = strongly disagree, 5 = strongly agree