HAPPINESS FOR PROJECT MANAGERS: FRAMEWORK AND EMPIRICAL ANALYSIS

In the past decade, organisations and governments have become increasingly interested in measuring how people feel, such as 'Happy Planet Index', 'the Well-Being index' and 'Gross National Happiness'. Indeed, practitioners and researchers have found that happiness, subjective well-being, is a strong predictor of various work outcomes including job performance, employee retention, workplace accidents, absenteeism, customer engagement, and profitability. To improve the levels of happiness, models were developed to examine antecedents of happiness; however, very few have focused on studying project managers (PMs), who play important roles in driving project success in the sector like construction. This study addresses this limitation by investigating the relationships among organisational factors, personal resources, and PM levels of happiness. Self-reported data was collected from 227 project management professionals, and was analysed using structural equation modelling. The results suggested a seven-factor PMs' happiness model. In particular, the mediating role of personal growth, positive work relationships, and meaningful work in the relationship between work environment and happiness at work was supported. In addition, work environment and meaningful work were found to be strong predictors of PM's happiness.

Keywords: subjective well-being, happiness, project management, project manager, structural equation modelling

INTRODUCTION

In the past decade, organisations and governments have become increasingly interested in measuring how people feel, such as 'Happy Planet Index', 'the Well-Being index' and 'Gross National Happiness'. In 2006, the New Economics Foundation (NEF), a British think-tank, introduced the Happy Planet Index to measure human well-being globally. In 2008, Gallup, Inc., an American multinational consulting company initiated the Well-Being Index to provide an in depth and nearly real-time view of Americans' well-being. In 2010, the British government announced to measure the happiness levels of the country which is called 'Goss National Happiness' as part of a £2 million a year well-being project. Since then, an annual national happiness report has been published to guide the public policy making process. These moves recognise that happiness, subjective well-being, is as important as economic growth and prosperity to make human flourishing. In fact, practitioners and researchers have found that happiness is a strong predictor of various work outcomes including job performance, employee retention, workplace accidents, absenteeism, customer engagement, and profitability (e.g., Fisher, 2010; Pryce-Jones & Lindsay, 2014; Lyubomirsky et al., 2005). In this paper, happiness, happiness at work and subjective well-being were used interchangeably.

To improve levels of subjective well-being, models have been mainly developed in the field of occupational health and psychology to examine antecedents of happiness. However, very few of them have focused on studying project managers (PMs), who play important roles in driving project success in the sector like the construction industry. Eaves et al. (2016), James et al. (2012); Love & Edwards (2005) tried to

narrow such a knowledge gap by studying the factors affecting well-being of construction workers and project managers; however, they all simply reduced the concept of happiness to health, job satisfaction and work-life balance. These studies, as a result, may provide an incomplete picture on what leads to happiness of project managers. This paper addresses this limitation by investigating how previously identified antecedents—including work environment, personal resources, meaningful work, work-life balance, personal development, and positive work relationship—could possibly explain project managers' happiness at work in a more holistic definition.

DEFINITION OF HAPPINESS

Based on previous literature, happiness has been viewed through two general perspectives: a hedonic approach or a eudaimonic approach. Hedonic happiness refers an abiding sense of satisfaction with life by the individual considering overall and domain-specific life experiences (Ryan & Deci, 2001; Ryff & Singer, 2008). In the hedonic view of happiness, life satisfaction is accompanied by new positive emotional experiences over time, meaning that the individual experiences more positive than negative emotions in their life (Diener, 2000). The second major view on happiness, the eudaimonic view, is concerned with the individual living a good life in a moral sense, being true to themselves, acting morally, doing meaningful activities, and growing as a person.

Diener & Seligman (2002) combined these two views of happiness into one, noting that hedonic happiness, while necessary, is limited by genetic inheritance and subject to the hedonic treadmill (the highs and lows of hedonic happiness are transitory). He postulates that hedonic happiness is insufficient and authentic happiness is derived by the partnering of hedonic and eudaimonic happiness. Eudaimonic happiness is not limited by genetically inherited predispositions to the experience of the vital yet transitory pleasant emotions that are definitive of hedonic happiness. There are also no limits to the experience of eudaimonia through work that is congruent with the self-actualization of the individual, attainment of important self-set goals, and contributing to the greater good.

Happiness at work is often conceptualized as transient and measured on the person level or unit level (Fisher 2010). Transient happiness-related constructs include: transitory affect and mood as well as state affect, flow, mood, engagement, task engagement, and intrinsic motivation. Person level happiness includes physical and emotional health, engagement, job involvement, job satisfaction, and personality-based predispositions. At the unit level, the happiness of teams, organizations, and other work units frequently encompasses group level engagement, morale, satisfaction, emotional tone, and mood. Happiness at work is the result of the individual, the work, and the social environment (the team and the organization as a whole) (McNulty 2012).

THE HAPPINESS MODEL AND HYPOTHESES

This section outlines the rationale for developing a theoretical model of happiness for project managers. The model is presented in Figure 1 below. Work environment and personal resources have been consistently shown to have a significant influence on an individual's happiness (e.g., Chaiprasit & Santidhiraku, 2011; Culbertson et al., 2010; Fisher, 2010). Although happiness as described above relates to the individual, the environment in which people work more broadly has an impact on their ability to

experience happiness (Deci & Ryan, 2008). For instance, by working in a healthy, respectful, and supportive work environment, individuals tend to get more positive affective experiences in the workplace (Warr, 2011). While work environment could provide a stage for people to experience happiness at work, each individual could obtain different levels of happiness based on their levels of personal resources such as confidence, optimism, and vitality. For example, optimistic people tend to define their positive experiences at work as permanent events, while pessimistic people are likely to define positive experiences as something temporary. Optimistic individuals thus could experience higher levels of happiness than pessimistic people do. For these reasons, in the model work environment and personal resources are hypothesised as positively related to happiness at work.

Hypothesis 1: Work environment is positively related to happiness at work for project managers.
Hypothesis 2: Personal resources are positively related to happiness at work for project managers.

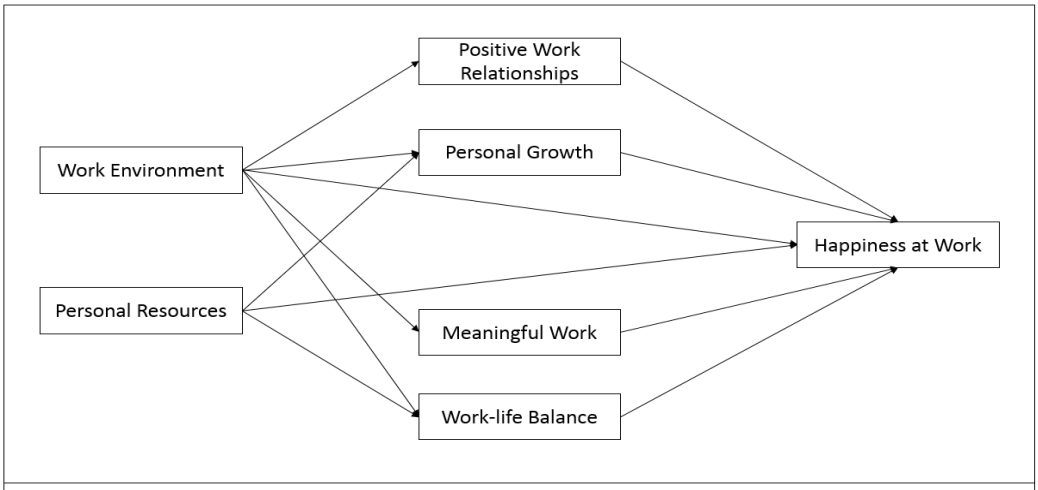

Figure 1. Proposed Theoretical Model

Although previous literature showed that work environment and personal resources are related to happiness, limited research has examined the factors that mediate such relationships. To narrow this knowledge gap, in this model personal growth, meaningful work, positive work relationships, and work-life balance were examined as the mediators that may explain the effect of work environment and personal resources on happiness at work.

Personal growth is a process of developing one's potential to grow and learn new knowledge and skills in a workplace (Irving & Williams, 1999). Both work environment and personal resources have a leading role in this process. For instance, in a supportive work environment, individuals are likely to receive training for developing necessary skills to do their job. Moreover, individuals with high levels of personal resources such as vitality tend to mobilize their energy better in order to achieve personal growth (Kashdan et al., 2004). In turn, personal growth could drive happiness at work if for no other reason than that it enhances one's capabilities to achieve his or her performance goals, and thus get higher levels of job satisfaction. In

summary, the positive effect that work environment and personal resources have on happiness at work is explained through personal growth.

Hypothesis 3: Personal Growth mediates the effect of work environment on happiness at work for project managers.
Hypothesis 4: Personal Growth mediates the effect of personal resources on happiness at work.

Meaningful work means an individual thinks that her job has a positive impact on others' lives Alexander and Douthit (2016) found that when people perceive their organizations to be socially responsible through their work environment, they have a stronger sense of meaning at work. As they feel their job is something meaningful to work on, they feel happier at work (Ryan & Deci, 2001).

Hypothesis 5: Meaningful work mediates the effect of work environment on happiness at work.

Positive work relationships refer to warm and trusting interpersonal relations between an individual and her colleagues. Researchers generally believe that a positive work environment, which contains a high level of trust among co-workers and relatively reduced rate of selfish acts, helps to build better work relationships. With positive work relationships, people tend to a have a stronger sense of belonging to the team and organization, which is a significant motivation for human beings, a source of happiness.

Hypothesis 6: Positive work relationships mediate the effect of work environment on happiness at work.

Work-life balance is a state of equilibrium between the demands of work and the demands of family or personal life (Tausig & Fenwick, 2001). Both work environment and personal resources help to achieve work-life balance. Lambert et al. (2006) found that autonomy and flexibility at work help in realizing work-life balance. In addition, according to Kirchmeyer (2002), to achieve work-life balance, personal resources such as vitality, time, and commitment are required to be well distributed across all life domains. When individuals are able to maintain a work-life balance, they are less likely to get overstressed, while they are more likely to enjoy their work and thus feel happy about what they do (Nordenmark et al., 2012)

Hypothesis 7: Work-life balance mediates the effect of work environment on happiness at work.
Hypothesis 8: Work-life balance mediates the effect of personal resources on happiness at work.

METHOD

Participants
The participants were 227 project management professionals attending an annual Project Management Institute (PMI) chapter educational event in Montgomery County, Maryland, USA. They completed the survey online in the fall of 2014 before the event and then attended a debriefing held at the event. The total response rate was 57%. The demographic information of the sample is shown in Figure 2.

Measures

Antecedents of happiness at work were collected using the Happiness at Work Survey (Marks, 2011), which was developed by the New Economic Foundation 12 years ago to measure happiness internationally across different industry sectors. The survey consists of 40 statements to which responses are made on a seven point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). Some items are negatively worded to balance the questionnaire.

Analytic strategy

Structural Equation Modelling (SEM) is ideally suitable to explore theoretical paths of influence among antecedents of happiness at work and testing the theoretical model as a holistic system. The technique has been used on a number of occasions (e.g., de Guzman et al., 2014; Mogilner, 2010; Momeni et al., 2011). SEM was performed using SPSS 24 and AMOS 24.

RESULTS

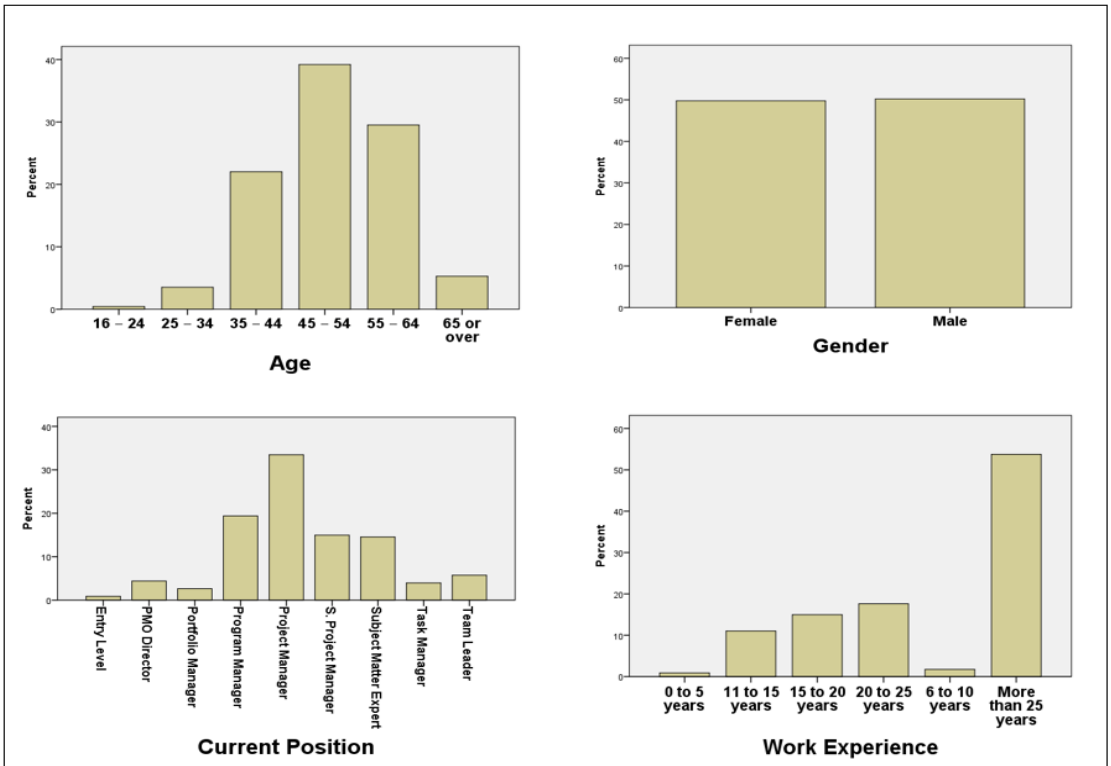

Figure 2. Demographics of sample

Exploratory factor analysis (EFA)

The factorial structure of the Happiness at Work Survey was tested with raw responses (n=227) to preserve statistical power. Responses to negatively worded states were reverse coded. Maximum Likelihood with Promax rotation was performed using SPSS 24. The pattern matrix of item loadings is shown in Appendix 1. All loadings were above the 0.400 threshold recommended by Hair et al. (2013) for sample sizes greater than 200. Cronbach's alpha values are reported for each factor in Table 1. All Cronbach's alpha values are above the recommended threshold of 0.700 for factor reliability (Fornell & Larcker, 1981). The factor analysis identified a seven-factor solution that incorporated 33 survey items and accounted for 58.82% of variance in happiness scores. This was regarded to be a statistically acceptable foundation to test

for structural linkages between factors using this data set. During the EFA, some items were dropped due to poor loadings or cross loadings.

The seven factors reflect the underlying dimensions or antecedents of happiness as measured by the Happiness at Work Survey in this study. To interpret and label these factors, a group of human factors experts and practitioners were given the relevant questions grouped as factors and asked to provide a unifying label for each factor. A thematic analysis was then conducted to generate a set of generally accepted factor labels. The resulting factor labels are presented as Table 1, along with example questions and the proportion of total variance accounted for by each factor.

Table 1. Happiness factors and example items

Factor	*Label*	*Example item*	*% total variance*	*Cronbach's alpha*
1	Happiness at work	Do you feel happy when you are at work?	34.32%	0.91
2	Positive work relationships	To what extent do you like the people within your team?	4.73%	0.77
3	Work Environment	Is it safe to speak up and challenge the way things are done within your organisation?	4.81%	0.89
4	Personal growth	Have you been able to learn new skills at work?	6.40%	0.85
5	Personal resources	To what extent do you feel full of energy in life?	3.10%	0.80
6	Work-life balance	Do you feel you have a balance between the time you spend on your work and the time you spend on other aspect of your life?	2.80%	0.74
7	Meaningful work	Do you think the job you do is beneficial to society in general?	2.60%	0.85

Confirmatory factor analysis (CFA)

The CFA confirmed the factor structure established during the EFA and provided additional measures for validity and reliability. The construct correlation matrix in Table 2 offers the correlations between factors, the average variance extracted (AVE), and composite reliability (CR). To obtain convergent validity, the AVEs of each factor should be bigger than 0.500 (Kline et al., 2012). We meet this threshold for all factors. To establish reliability, the CR of each factor should be greater than 0.700. We meet this threshold for all factors. Finally, to achieve discriminant validity, the square root of the AVE should be less than any correlation with another factor. All of the factors achieve this criterion. In addition, the CFA generated the goodness of fit statistics for the final measurement model, including CMIN/df = 2.149, CFI=0.916, and SRMR=0.056. All the statistics met the thresholds from Hu and Bentler (1999).

Structural model

To test our hypotheses, we analysed our model using AMOS 24. The model achieved adequate goodness of fit: GFI = 0.945, CFI = 0.958; CMI/df =5.461. The total variance explained is ideal for the endogenous variables in the model: R-squared= 85% for happiness at work. To further test the mediation effects hypothesised in the model, we used Bootstrapping method to do resampling for 2000 times in order to construct a 95 percent confidence interval for detecting the indirect effect.

Table 2. Construct Correlation Matrix (square root of the AVE on the diagonal)

	CR	AVE	WB	HW	PWR	WE	PG	PR	MW
Work-life balance (WB)	0.732	0.601	**0.775**						
Happiness at work (HW)	0.903	0.651	0.371	**0.807**					
Positive work relationship (PWR)	0.767	0.528	0.212	0.696	**0.727**				
Work environment (WE)	0.891	0.625	0.373	0.754	0.646	**0.790**			
Personal growth (PG)	0.847	0.582	0.257	0.786	0.673	0.685	**0.763**		
Personal resources (PR)	0.766	0.540	0.376	0.380	0.193	0.260	0.293	**0.735**	
Meaningful work (MW)	0.858	0.751	0.214	0.699	0.442	0.503	0.580	0.229	**0.867**

We found support for five of the eight hypotheses. The direct effects of work environment (H1) and personal resources (H2) on happiness at work is significant. Additionally, the bootstrapped indirect effects of H3, H5, and H6 were significant. These indicate that personal growth, positive work relationships and meaningful work mediate the effect of work environment on happiness at work. Figure 3 and table 3 summarizes these findings.

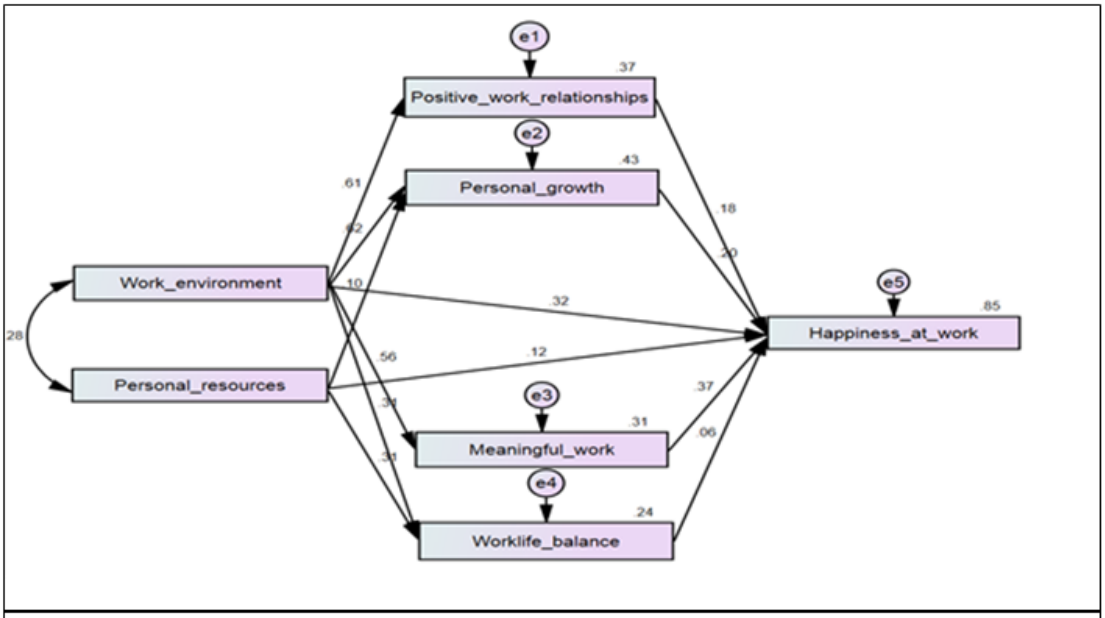

Figure 3. The structural model

DISCUSSION

To understand what predicts happiness at work for project managers, this study examined the factors including work environment, personal resources, personal growth, meaningful work, positive work relationships, and work-life balance. The results showed that all these factors have significant positive effects on project managers' happiness at work. In addition, personal growth, meaningful work, and positive work relationships mediate the effect of work environment on happiness.

The main insight gained from the study is that work environment affects happiness at work for project managers through the positive functioning variables: personal growth, meaningful work, and positive work relationships. This is a critical finding because many happiness studies place work environment as a direct antecedent to happiness at work without considering the effect of positive functioning variables.

Thus, the theoretical relationships developed in such studies may be incomplete, and the findings may be somewhat distorted because the causal relationship may actually be occurring through unaccounted for and unmeasured variables.

Table 3. Summary of Findings

Hypthesis	Direct Effect			Standardized Regression Weights	S.E.	P-value
	Work environment	-->	Personal growth	0.621	0.048	***
	Work environment	-->	Positive work relationships	0.606	0.045	***
	Work environment	-->	Meaningful work	0.558	0.042	***
	Work environment	-->	Worklife balance	0.309	0.033	***
	Personal resources	-->	Worklife balance	0.309	0.066	***
	Personal resources	-->	Personal growth	0.100	0.097	0.056
	Positive work relationships	-->	Happiness at work	0.183	0.025	***
H1	Work environment	-->	Happiness at work	0.325	0.028	***
	Personal growth	-->	Happiness at work	0.198	0.024	***
H2	Personal resources	-->	Happiness at work	0.122	0.037	***
	Meaningful work	-->	Happiness at work	0.367	0.027	***
	Worklife balance	-->	Happiness at work	0.060	0.035	0.048
Hypthesis	**Indirect Effect (Mediation)**			**Estimate**	**Lower and Upper**	**P-value**
H3	Work environment --> Personal Growth --> Happiness at work			0.078	0.045, 0.124	0.000
H4	Personal resources -->Personal growth --> Happiness at work			0.025	0.000, 0.059	0.053
H5	Work environment--> Meaningful work --> Happiness at work			0.130	0.093, 0.185	0.000
H6	Work environment --> Positive work relationships --> Happiness at work			0.071	0.036, 0.109	0.001
H7	Work environment --> Worklife balance --> Happiness at work			0.012	-0.002, 0.031	0.092
H8	Personal resources -->Worklife balance --> Happiness at work			0.024	-0.005, 0.059	0.101

Remarks:

*** p <0.000

Hypthesis was supported

The main insight gained from the study is that work environment affects happiness at work for project managers through the positive functioning variables: personal growth, meaningful work, and positive work relationships. This is a critical finding because many happiness studies place work environment as a direct antecedent to happiness at work without considering the effect of positive functioning variables. Thus, the theoretical relationships developed in such studies may be incomplete, and the findings may be somewhat distorted because the causal relationship may actually be occurring through unaccounted for and unmeasured variables.

Additionally, there are some unexpected insights gained from this study. First, despite logical intuition and literature supporting that work-life balance mediates the effect of work environment on happiness at work, the mediation effect was not statistically significant. This insignificant effect may be due to the weak effect of work-life balance on happiness at work (standardised regression weights = 0.06). As project management is a profession that always requires delivering projects within time, cost, and budget, project managers tend to be target-oriented. To achieve their targets, they are more willing to put in extra effort whenever it is necessary. That could explain why work-life balance does not serve as a mediator for project managers' happiness. Second, the mediation effects of personal growth on the relationship between personal resources and happiness at work was insignificant. The reason is that personal resources have no significant effect on personal growth. As this study only includes vitality and resilience as personal resources, we suspect that other personal resources that were not included such as self-efficacy, optimum, and hope, could generate a different result. Finally, work-life balance has an insignificant mediation effect on the relationship between personal resources and happiness at work. This insignificant effect is likely due to the weak effect of work-life balance on happiness at work, which is the same as what we discussed previously.

From a practical perspective, the insights from this study suggest that organisations should invest more on building a positive work environment and creating a positive meaning at work because these two factors supply a stronger effect on happiness at work than other factors. The standard regression weights of work environment and meaningful work is 0.325 and 0.367 respectively.

This study was limited in many common ways. First, as project managers were surveyed using self-reporting measures rather than conducting an experiment, observation or measuring happiness for a specific event. Thus the measures of the study are subject to self-reporting bias. Second, we only obtained a usable sample size of 227. While it is not small, it is also not large given the complexity of the model. With a larger sample size, more reliable estimates could be obtained and tested. Lastly, we did not control for any potentially confounding variables, such as age and gender.

Beyond overcoming these limitations, future research are recommended to further explore the effect of personal resources, which have been widely studied in positive psychology, for the relationships in the model. Psychological capital could be one of the resources at the top of the list due to its linkage with various positive outcomes. Moreover, future research could also look into the interaction effect between work environment and personal resources on happiness at work, an interaction that more closely corresponds to dynamics at play in real-world situations.

CONCLUSIONS

In this study we aim to get a better understanding of the antecedents and their relationships as they contribute to project manager happiness at work. We found that work environment and personal resources, personal growth, meaningful work, positive work relationships, and work-life balance have significant positive effects on project managers' happiness at work. In addition, personal growth, meaningful work, and positive work relationships mediate the effect of work environment on happiness at work. Although limited in scope, the findings from this study enable construction researchers to conduct studies on happiness based on a more well-defined measurement suggested in the model. It thus shines light on several new opportunities to better understand what leads to happiness at work for project managers, and provide a foundation upon which other may build as they seek to find ways to better understand and improve happiness at work.

REFERENCES

Alexander, A. K., & Douthit, M. W. (2016). The Power of Purpose: How Organizations are Making Work More Meaningful. In Academy of Management Proceedings (Vol. 2016, p. 11489). Academy of Management.

Chaiprasit, K., & Santidhiraku, O. (2011). Happiness at Work of Employees in Small and Medium-sized Enterprises, Thailand. Procedia - Social and Behavioral Sciences, 25, 189–200.

Culbertson, S. S., Fullagar, C. J., & Mills, M. J. (2010). Feeling good and doing great: The relationship between psychological capital and well-being. Journal of Occupational Health Psychology, 15(4), 421–433.

Deci, E. L., & Ryan, R. M. (2008). Facilitating optimal motivation and psychological well-being across life's domains. Canadian Psychology/Psychologie Canadienne, 49(1), 14–23.

Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. American Psychologist, 55(1), 34–43.

Diener, E., & Seligman, M. E. P. (2002). Very Happy People. Psychological Science (0956-7976), 13(1), 81.

Eaves, S., Gyi, D. E., & Gibb, A. G. F. (2016). Building healthy construction workers: Their views on health, wellbeing and better workplace design. Applied Ergonomics, 54, 10–18.

Fisher, C. D. (2010). Happiness at Work C.D. Fisher Happiness at Work. International Journal of Management Reviews, 12(4), 384–412.

Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. Journal of Marketing Research, 382–388.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2013). Multivariate Data Analysis. Pearson Education Limited.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. Structural Equation Modeling: A Multidisciplinary Journal, 6(1), 1–55.

Irving, J. A., & Williams, D. I. (1999). Personal growth and personal development: Concepts clarified. British Journal of Guidance & Counselling, 27(4), 517–526.

Kashdan, T. B., Rose, P., & Fincham, F. D. (2004). Curiosity and exploration: Facilitating positive subjective experiences and personal growth opportunities. Journal of Personality Assessment, 82(3), 291–305.

Kirchmeyer, C. (2002) Work-life initiatives: Greed or benevolence regarding workers' time. Cooper, C.L., & Rousseau, D.M. (Eds.), Trends in organizational behavior, Wiley, West Sussex, UK, V(7), 79-93.

Kline, E., Wilson, C., Ereshefsky, S., Tsuji, T., Schiffman, J., Pitts, S., & Reeves, G. (2012). Convergent and discriminant validity of attenuated psychosis screening tools. Schizophrenia Research, 134(1), 49–53.

Lambert, C. H., Kass, S. J., Piotrowski, C., & Vodanovich, S. J. (2006). Impact Factors on Work-Family Balance: Initial Support for Border Theory. Organization Development Journal; Chesterland, 24(3), 64–75.

Love, P., & Edwards, D., (2005). Taking the pulse of UK construction project managers' health: Influence of job demands, job control and social support on psychological wellbeing. Engineering, Construction and Architectural Management, 12(1), 88–101.

Lyubomirsky, S., King, L., & Diener, E. (2005). The benefits of frequent positive affect: Does happiness lead to success? American Psychological Association. Retrieved from http://psycnet.apa.org/journals/bul/131/6/803/

McNulty, J. K., & Fincham, F. D. (2012). Beyond positive psychology? Toward a contextual view of psychological processes and well-being. American Psychologist, 67(2), 101–110.

Momeni, M., Kalali, N. S., Anvari, M. R. A., Raoofi, Z., & Zarrineh, A. (2011). What kind of people are the happiest? An empirical study. International Review of Business Research Papers, 7(3), 42–54.

Nordenmark, M., Vinberg, S., & Strandh, M. (2012). Job control and demands, work-life balance and wellbeing among self-employed men and women in Europe. Vulnerable Groups & Inclusion, 3(1), 18896.

Pryce-Jones, J., & Lindsay, J. (2014). What happiness at work is and how to use it. Industrial and Commercial Training, 46(3), 130–134. https://doi.org/10.1108/ICT-10-2013-0072

Ryan, R. M., & Deci, E. L. (2001). On Happiness and Human Potentials: A Review of Research on Hedonic and Eudaimonic Well-Being. Annual Review of Psychology, 52(1), 141–166.

Ryff, C. D., & Singer, B. H. (2008). Know Thyself and Become What You Are: A Eudaimonic Approach to Psychological Well-Being. Journal of Happiness Studies, 9(1), 13–39.

Tausig, M., & Fenwick, R. (2001). Unbinding Time: Alternate Work Schedules and Work-Life Balance. Journal of Family and Economic Issues, 22(2), 101–119.

Warr, P. (2011). Work, Happiness, and Unhappiness. Psychology Press.