

LEISURE PARTICIPATION, JOB STRESS, AND LIFE SATISFACTION: MODERATION ANALYSIS OF TWO MODELS

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I explored the relationships among leisure participation, job stress, and life satisfaction of Taiwanese high school teachers and college professors ($N = 488$) and investigated the moderating effects of taking on an extra administrative duty and type of school (college vs. high school). Results revealed that leisure participation negatively predicted job stress, and job stress negatively explained life satisfaction. Additionally, both taking on an extra administrative duty and type of school moderated the relationship between job stress and life satisfaction. Research implications are discussed.

Keywords: leisure participation, job stress, life satisfaction, Taiwanese high school teachers, Taiwanese college professors.

Life satisfaction has been a popular research topic in social sciences. Individuals with greater life satisfaction feel better psychologically about their lives than other people do (Erdogan, Bauer, Truxillo, & Mansfield, 2012). However, most people earn their living by working hard. Job stress and unemployment could both have a negative effect on life satisfaction. (Lucas, Clark, Georgellis, & Diener, 2004). *Life satisfaction* is defined as an overall assessment of feelings and attitudes about one's life at a particular point in time, consisting of desire to change one's life, satisfaction with the past, satisfaction with the future, and significant others' views of one's life (Diener, 1984; Diener, Suh, Lucas, & Smith, 1999; Ye, Yu, & Li, 2012). *Job stress* is "the response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope" (World Health Organization, 2015). In a

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study of teachers in the United Kingdom, the researchers suggested that teachers working under poor conditions tend to report lower levels of psychological well-being than others do (Griva & Joeke, 2003). Empirical evidence also shows that stress and job burnout are significantly related (Hayes & Weathington, 2007). Perceived job stress has also been shown to exert a negative impact on life satisfaction (Erdogan et al., 2012). Consequently, it can be hypothesized that job stress will be negatively correlated with life satisfaction.

Leisure participation may be one coping strategy for job stress (Trenberth, Dewe, & Walkey, 1999). *Leisure participation* is defined as the number of times an individual engages in leisure activities during a period of time (Ragheb & Griffith, 1982). In a study conducted with a Swedish population, findings revealed that a low level of leisure participation was related to overtime work and job strain (Wemme & Rosvall, 2005). As a result, these researchers reported that it followed that individuals who engaged in a lot of recreational activities revealed less job stress compared with the group who had a low level of participation.

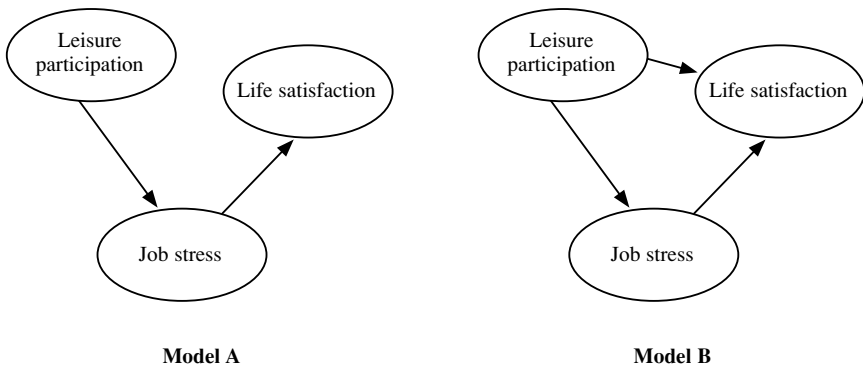


Figure 1. *Alternative models tested in the study.*

Findings reported in literature suggest that the contribution of leisure participation to subjective well-being, or life satisfaction, is inconclusive (Kelly, Steinkamp, & Kelly, 1987). In a study to investigate the relationships among leisure participation, life satisfaction, and leisure satisfaction, Ragheb and Griffith (1982) found that leisure satisfaction mediated the relationship between leisure participation and life satisfaction. More specifically, leisure participation predicted life satisfaction through leisure satisfaction. However, on the basis of empirical evidence, Neal, Sirgy, and Uysal (1999) pointed out that individuals' overall life satisfaction can be predicted by the leisure in their daily life. Additionally, in a recent study, Newman, Tay, and Diener (2014) pointed out that leisure participation leads to enhanced subjective well-being through a series of psychological mechanisms.

On the basis of the preceding review of literature, I framed the research question and proposed the hypotheses to be tested in the current study (see Figure 1).

Research Question 1: Which of the two models proposed (A vs. B) for the relationship of leisure participation, job stress, and life satisfaction fits the data better?

Hypothesis 1: Leisure participation will negatively predict job stress.

Hypothesis 2: Job stress will negatively predict life satisfaction.

Teachers working at both high schools and colleges may have opportunities to take on administration duties. In addition to their teaching workload, teachers have to allocate extra time resources to deal with this administrative work. This implies that the workload increases when teachers fulfil different work roles. There is evidence to suggest that role conflict is a strong predictor for work-related stress and well-being (Van Bogaert et al., 2014). Furthermore, heavy workload as well as a high level of work–family conflict may negatively influence life satisfaction among academic employees (Mauno, Ruokolainen, & Kinnunen, 2013). Similarly, dual-job holding may increase job stress and decrease quality of life (Jamal, Baba, & Rivière, 1998). Findings in a study conducted with professional school counselors who were also required to perform noncounseling duties revealed an increased level of burnout perceived by the participants, including exhaustion and deterioration of personal life (Bardhoshi, Schweinle, & Duncan, 2014). In addition, Kolodinsky, Draves, Schroder, Lindsey, and Zlatev (2009) found that paperwork and other noncounseling duties interfered with the roles of school counselors and were, indeed, a source of job stress and dissatisfaction for them. Similarly, school counselors who performed noncounseling duties (labeled as inappropriate by the authors) rated them as highly demanding (McCarthy, Kerne, Calfa, Lambert, & Guzmán, 2010). Although the evidence from studies conducted with professional counselors may not be in a context identical to that of college professors, similar concepts are applicable, so that dual-job holding is likely to interfere with the work–life balance of a college professor. As a result, I developed the following hypothesis:

Hypothesis 3a: The relationship between job stress and life satisfaction will be stronger for those who take on administration duties than for those who do not.

The job description for most college professors usually includes teaching, research, and services. In addition to teaching workload, college professors are required to conduct research and to publish their work in journal articles or as conference presentations. Providing students with academic advice is also one of the primary tasks of college professors. Finally, serving in academic organizations or communities may be another working area for college professors. In contrast, high school teachers focus mainly on teaching instead of spending time on research and services. This infers that those working in colleges

may be more likely to assume a heavy workload than are those employed in high schools. In recent studies researchers have suggested that work overload causes greater job stress which, in turn, leads to less life satisfaction (Sheraz, Wajid, Sajid, Qureshi, & Rizwan, 2014). In another study conducted in Pakistan the results showed that job performance may be attributed to the level of perceived job stress (Bashir & Ramay, 2010). Erdogan et al. (2012) found that job stress may result from job-related tension consisting of a work-context stressor such as work overload. Therefore, because I considered that college professors assume more job tasks than high school teachers do, this implies that college professors would more stressed about their jobs than high school teachers would. Based on this reasoning, the following hypothesis was generated:

Hypothesis 3b: The relationship between job stress and life satisfaction will be stronger for college professors than for high school teachers.

Method

Instruments

The items I used to measure leisure participation were selected from the work of Lin, Wang, and Liao (2004). The level of each type of leisure participation was measured from 1 (*zero times per week*) to 5 (*seven times per week*). The items to measure job stress were modified from the work of Parker and DeCotiis (1983) and were rated on a 5-point Likert-type scale ranging from 1 (*strongly disagree*) through to 5 (*strongly agree*). Items to measure life satisfaction were adopted from the official website of the Ministry of Education in Taiwan (2015) and were rated on a 5-point Likert-type scale ranging from 1 (*strongly disagree*) through to 5 (*strongly agree*). These items are shown in Table 1.

Table 1. *Items in the Measures used in the Study*

Construct	Items
Leisure participation	1. How many times during the past week did you participate in entertainment activities?
	2. How many times during the past week did you participate in sports activities?
	3. How many times during the past week did you participate in knowledge-seeking activities?
	4. How many times during the past week did you participate in skill-sharpening activities?
	5. How many times during the past week did you participate in social-enhancing activities?

Table 1 continued

Construct	Items
Job stress	<ol style="list-style-type: none"> 1. I have felt fidgety or nervous as a result of my job. 2. Working here makes it hard to spend enough time with my family. 3. Working here leaves little time for other activities. 4. I feel guilty when I take time off from my job. 5. I sometimes dread the telephone ringing at home because the call might be job-related. 6. Sometimes when I think about my job, I get a tight feeling in my chest. 7. Too many people at my level in the company get burned out by job demands. 8. I feel like I never have a day off.
Life satisfaction	<ol style="list-style-type: none"> 1. Most of my life goes according to my expectations. 2. My living conditions are good. 3. I am satisfied with my life. 4. Up till this stage of my life I have had things that mean a lot to me. 5. It is unlikely that I would change my life if I had a chance.

Sampling, Procedure, and Participants

Participants in this study were high school teachers and college professors in Taiwan. All 16 colleges in Taichung City were included in the study, and 12 of the 95 high schools in this city were randomly selected. I mailed 20 survey forms to each of the 16 colleges and 12 high schools. Participation was voluntary. I received 488 usable survey forms for a response rate of 87%. Demographic information of the participants is presented in Table 2.

Table 2. Demographic Information of Participants

	Total Sample	College Sample	High School Sample
Gender			
Male	255 (47.7%)	104 (40.3%)	151 (65.7%)
Female	233 (52.3%)	154 (59.7%)	79 (34.3%)
Age in years			
20–29	41 (8.4%)	10 (3.9%)	31 (13.5%)
30–39	181 (37.1%)	54 (20.9%)	127 (55.2%)
40–49	166 (34.0%)	112 (43.4%)	54 (23.5%)
>50	100 (20.5%)	82 (31.8%)	18 (7.8%)
Education			
Bachelor's degree	118 (24.2%)	13 (5.0%)	105 (45.6%)
Master's degree	212 (43.4%)	87 (33.7%)	125 (54.4%)
Doctorate	158 (32.4%)	158 (61.2%)	0 (0%)
Administrative duty			
Yes	173 (35.4%)	110 (42.6%)	63 (27.4%)
No	315 (64.6%)	148 (57.4%)	167 (72.6%)

Data Analysis

The efficacy of the proposed model was examined using SPSS 14.0 and LISREL 8.51. Structural equation modeling was performed to test the hypothesized relationships among the constructs under study. To test the moderating effect of taking on administrative duties as well as type of school, a two-group overall path model was conducted, and the adequacy of the model fit was examined by assessing the suggested criteria, followed by examining path coefficients to test the significance of each specific relationship. Then a two-group stacked model was tested to establish whether or not their individual path coefficients were equal. The differences in chi-square value between the restricted model and the base model were used to test the equality of the path coefficients (Chiou, Huang, & Chuang, 2005).

Results

Descriptive Statistics

The summated means for the constructs were leisure participation, 2.44; job stress, 3.06; and life satisfaction, 3.58 and the standard deviations ranged from 0.61 to 0.73. I used Cronbach's alpha to evaluate construct reliabilities and values were: leisure participation, .63; job stress, .89; and life satisfaction, .84. Thus, the reliability value was close to .7 for leisure participation and the reliability of the two other constructs was acceptable according to the suggested threshold of .7 (Nunnally & Bernstein, 1994, p. 265).

Analysis of the Two Models

The results of the analysis suggested that the difference in χ^2 values between Model A ($\chi^2 = 298.73$, $df = 117$) and Model B ($\chi^2 = 298.69$, $df = 116$) was not statistically significant ($\Delta\chi^2 = 0.04$, $p > .05$), implying that there was no difference between Model A and Model B. Therefore, in answer to RQ1, the parsimonious model (Model A) was more appropriate in this study.

Overall Model Fit

The overall fit of the structural model was satisfactory. The root mean square error of approximation (RMSEA) value (.056) was lower than the suggested threshold of .08 (Hu & Bentler, 1999). Additionally, normed fit index (NFI), non-normed fit index (NNFI), comparative fit index (CFI), goodness-of-fit index (GFI), and incremental fit index (IFI) were calculated and the results were all greater than the suggested threshold of .90: NFI = .93, NNFI = .95, CFI = .96, GFI = .92, IFI = .98 (Hair, Black, Babin, Anderson, & Tatham, 2006).

Testing Hypotheses 1 and 2

Both path coefficients specified in H1 and H2 were fully supported. Leisure participation negatively predicted job stress ($\beta = -.30, t = -5.69, p < .05$), and job stress negatively predicted life satisfaction ($\gamma = -.13, t = -2.15, p < .05$).

Testing for the Moderating Effect of Taking On Administration Duties

To test the moderating effect of taking on administration duties, equality was imposed across participants who had taken on administration duties and those who had not. When equality was constrained ($\beta_{\text{job stress} \rightarrow \text{life satisfaction}}$) across groups, a significant difference in chi-square value occurred ($\Delta\chi^2 = 4.32, p = .037$), indicating that the relationship between job stress and life satisfaction for those who took on administration duties (-.32) was significantly greater than for those who had not (-.13), supporting H3a.

Testing for the Moderating Effect of Type of School

Similarly, when equality was constrained ($\beta_{\text{job stress} \rightarrow \text{life satisfaction}}$) across groups, a significant difference in chi-square value occurred ($\Delta\chi^2 = 5.2, p = .022$), implying that the relationship between job stress and life satisfaction for college professors (-.45) was significantly greater than for high school teachers (-.21), supporting H3b.

Discussion

In this study the results indicated that leisure participation did not predict life satisfaction directly; instead, leisure participation predicted life satisfaction through the mediator of job stress. The finding on the two models tested was in line with the work of Kelly et al. (1987) and Ragheb and Griffith (1982). More specifically, life satisfaction may not be predicted directly by leisure participation. However, life satisfaction may be predicted by leisure participation by means of certain mediating variables, such as job stress, as in the current research.

Results of the current study also demonstrated that leisure participation negatively predicted job stress, meaning that the higher the level of leisure participation, the lower is the level of perceived job stress. This finding is similar to that reported in past literature, such as the work of Trenberth et al. (1999) and of Wemme and Rosvall (2005). Additionally, job stress negatively predicted life satisfaction, suggesting that the higher the level of job stress, the lower is the level of perceived life satisfaction. This finding coincided with that reported in previous work (Griva & Joekes, 2003; Hayes & Weathington, 2007; Lucas et al., 2004). The practical implication of this finding may be that increasing individuals' leisure participation could decrease their perceived job stress. Government agencies or privately owned organizations may be able to

utilize leisure activities as an avenue for decreasing job stress which, in turn, may increase life satisfaction.

The result of moderation analysis showed that the relationship between job stress and life satisfaction was stronger for those participants who took on administration duties than for those who did not. This finding is consistent with concepts proposed by Van Bogaert et al. (2014), Mauno et al. (2013), and Jamal et al. (1998). Teachers who take on administrative duties may feel more stressed about their jobs and less satisfied with their lives than do their counterparts who have not taken on such duties. In addition, I found the relationship between job stress and life satisfaction was stronger for college professors than for high school teachers, suggesting that college professors may be more stressed about their jobs than are high school teachers because the college professors are likely to have more diversified job tasks. Overall, taking on an administrative duty strengthened the job stress–life satisfaction relationship and college professors encountered a stronger job stress–life satisfaction relationship than did high school teachers.

Finally, a limitation in the current study was that it was conducted in Taiwan; thus, the generalizability of my findings needs to be validated in different contexts. Furthermore, the internal consistency for leisure participation may be improved in future studies. In addition, my study was exploratory in nature, and this implies that the complex relationships investigated were presented in a simplistic way. There are other factors, such as gender, family variables, and/or socioeconomic status, that may moderate work–leisure balance. Therefore, future researchers may consider other moderators to gain further understanding about the relationships among job stress, leisure participation, and life satisfaction of teachers or academic staff. Additionally, the teachers and professors who took part in my study may not have considered certain knowledge-seeking leisure activities solely as leisure, such as taking additional training or upgrading, which may have confounded the results. Future researchers should take this possible confounding effect into consideration. Finally, this study was conducted by a cross-sectional method, meaning that variation in the level of variables of interest may not have been fully captured. Specifically, job stress may vary greatly depending on the time of year when a study is conducted. Therefore, in future studies researchers should adopt a longitudinal approach to establish the variations on a timeline.

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