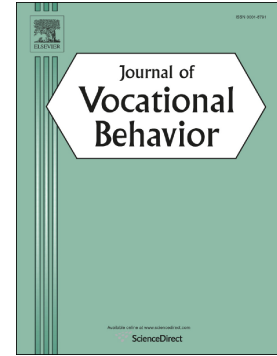


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**Work Resources and Civic Engagement: Benefits to Employee Physical and Mental
Health**

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Work Resources and Civic Engagement: Benefits to Employee Physical and Mental Health

Abstract

Research has demonstrated that people can function better when they participate in both work and non-work roles. Drawing on this premise, this paper examines the combined effects of positive work and non-work experiences—measured by perceptions of acquiring valuable resources at work and engagement in civic activities—on happiness and health. Using a representative sample of 10,331 people in China, we demonstrate that civic engagement and work resources enhance people's perception of happiness and that this, in turn, is conducive to greater mental and physical health. We also found that the association between civic engagement and happiness is moderated by income such that the association is positive for people with either low or high income, whereas there is no association for middle or upper-middle income. There is negative association between work resources and happiness for middle level income, but no association was found for other levels of income. Implications for theory and practice are discussed.

Keywords: *Civic engagement, work-non-work enrichment, work resources, happiness, physical health, mental health, China.*

Introduction

Economic turbulence makes employment in contemporary society very demanding (Sonnentag & Fritz, 2015). Employees increasingly work longer hours to prove hardcore commitment to their organizations, reduce the risks of layoffs and maintain the same level of income as before the economic crisis (Fondas, 2014). Consequently, work-home tensions, marital conflict, mental exhaustion, and substance abuse are on the increase (Adkins & Premeaux, 2012; Drummond et al., 2016). This trend may have significant negative repercussions on people's capacity to engage in other domains outside work (hereinafter non-work) and consequently on their wellbeing as the benefits of engaging in both work and non-work domains are well-documented in numerous literatures (Booth, Park, & Glomb, 2009; Ollier-Malaterre, 2010; Meuris & Leana, 2015; Newman, Tay, & Diener, 2013; Ryan, Huta, & Deci 2008; Sonnentag, Kuttler, & Fritz, 2010). Work-family researchers have widely demonstrated that engaging in both work and non-work activities can reduce work-family conflict (Griggs, Casper, & Eby, 2013) and increase work-family enrichment (Greenhaus & Powell, 2006; Hakanen, Peeters, & Perhoniemi, 2011; Russo, 2015; Wayne, Casper, Matthews, & Allen, 2013). Stress researchers have also documented that engaging in meaningful activities outside work can help employees recover, recharge their batteries, and 'switch off' from work-related preoccupations (Bakker, Demerouti, Oerlemans, Sonnentag, 2013; Sonnentag & Fritz, 2015). Similarly, career researchers claim that devoting time to community and to personal interests outside work is crucial to build a sustainable career over time (Greenhaus & Kossek, 2014; Newman, 2011; Ng & Feldman, 2014).

In this paper, we focus on the effects of work-non-work enrichment on people's happiness and their physical and mental health. Drawing on prior research, we define happiness as a highly valued positive emotional state that is related to subjective well-being and general satisfaction (Kim-Prieto, Diener, Tamir, Scollon, & Diener, 2005), whereas health as an

individual's condition that can be examined from a focus on individual biomedical state to a wide-ranging aspects of human welfare (Salomon, Mathers, Chatterji, Sadana, Ustun, & Murray, 2003).

Using a sample of 10,331 employees in rural and urban areas of China, we examine whether people's experience of work-non-work enrichment, captured by their engagement in civic activities and perception of acquiring valuable resources at work (hereinafter work resources), is likely to enhance their physical and mental health indirectly, by making them experience greater levels of happiness. Moreover, we test whether the individuals' level of income is likely to moderate the relationship between work-non-work enrichment and happiness.

Importantly, of the various resources individuals can acquire at work, we focused on the extent to which an organization provides employees with health, retirement and housing benefits. We made this decision because such monetary resources are particularly important to ensure a high quality of life and can lead employees to direct their attention away from the accomplishment of basic self needs (i.e. financial security) to more altruistic activities, such as contributing to the local community (Rothbard, 2001). To capture employees' positive non-work experiences, we focused on civic engagement, which refers to involvement in community and societal activities (Wilson & Musick, 1997), for two reasons. First, prior research on the relationship between work and civic engagement is mostly limited to Western countries (see Yiengprugsawan, Somboonsook, Seubsman, & Sleigh, 2012 for a noticeable exception). Second, when focusing on individuals' non-work activities, scholars have mostly focused on the time employees spend within their families (Voydanoff, 2001). Although family is a crucial component of personal life, a considerable number of people strongly identify with and engage in other roles outside the family, including leisure, sport and/or

community roles (Haar, Russo, Sune, & Ollier-Malaterre, 2014; Keeney, Bond, Sinha, Westring, & Ryan, 2013), making this an important but so far overlooked area of inquiry.

Theoretical Framework and Hypotheses Development

We base our rationale on work-family enrichment (Greenhaus & Powell, 2006) and the Conservation of Resource (Hobfoll, 1989) theories. Work-family enrichment theory posits that when performing in either a work or a non-work role, people can acquire valuable resources, such as skills, self-esteem, social support, salary and others, which can be carried over into other roles, generating significant performance improvements and better system functioning (Greenhaus & Powell, 2006). This favorable scenario is likely to occur for two main reasons. First, certain resources are cross-functional, and can be used to accomplish meaningful goals in multiple roles (e.g., the salary can help an employee to pay for his/her piano lessons and thereby to cultivate a personal interest). Second, when employees are able to develop positive synergies between work and non-work domains, they are likely to experience positive emotions that spill over into many facets of life, resulting in greater positive affect (Carmeli & Russo, 2016; Greenhaus & Powell, 2006). Milliken, Schipani, Bishara and Prado (2015) have provided several examples of how positive experiences at work can help employees to become more effective in the local community. For instance, they argue that working in a finance department can give employees skills relevant to serving as financial advisor on school or community boards.

Conservation Of Resource (COR) theory (Hobfoll, 1989, 2002) posits that people seek to acquire and defend the resources they need to accomplish the things they value in life (Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014). Accordingly, people are more inclined to engage in activities that help them acquire further resources and/or protect the resources they already have.

Ten Brummelhuis and Bakker (2012) offer a synthesis of these two frameworks, by introducing the *work-home resource* model, which identifies in the work-home enrichment the key process through which people can accumulate, replenish and broaden the repertoire of resources at their disposal. More specifically, they argue that by actualizing the positive synergies between work and non-work domains, people can trigger a resource generative process, i.e. a *resource gain spiral*, through which they can develop and accumulate further resources that may help them to successfully cope with work and non-work demands (Ten Brummelhuis & Bakker, 2012). For example, an employee might resolve an important work problem with the advice of a member of his/her local community. The help received can trigger a resource gain spiral, as it may help the focal employee accumulate further resources in the workplace, such as a positive evaluation for having successfully solved a work problem, greater self-esteem, promotion and/or monetary reward.

Drawing on these paradigms, we hypothesize that people's engagement in civic activities can enhance their level of happiness. We contend that by participating in the activities of their local community, employees can accumulate important resources, such as a positive disposition, skills and abilities, new friends, self-confidence, and interpersonal skills, which can be used in multiple domains and enable them to perform and feel better both at and outside work (Greenhaus & Powell, 2006). Another reason we believe that civic engagement can make people happier is that by contributing to the development of their local community, employees can experience a sense of meaningfulness and feel useful. Research has shown that helping others can make people happier and more satisfied with their lives (Ferguson, Carlson, Zivnuska, & Whitten, 2012). Thus, we hypothesize the following:

H1: Civic engagement is positively associated with perception of life happiness

Work Resources and Happiness

Resources are defined as objects, things and conditions that people value (Hobfoll, 1989, 2002) as they are conducive to desirable outcomes (Halbesleben et al., 2014). Work resources include social support, autonomy, job security, income, allowances, self-esteem, resilience, and emotional intelligence (Greenhaus & Powell, 2006; Halbesleben et al., 2014; Russo, 2015; Ten Brummelhuis & Bakker, 2012). Work support and other workplace mechanisms are strongly related to happiness, wellbeing and positive work attitudes (Becchetti, Bruni, & Zamagni, 2015; Fisher, 2010). Acquiring valuable resources at work can have important generative effects (Hakanen et al., 2011; McNall, Nicklin, & Masuda, 2010; Ten Brummelhuis & Bakker, 2012) that can benefit both personal and professional outcomes, including wellbeing (Cummins, 2000).

In this paper, drawing on self-determination theory (Deci & Ryan, 1985), we contend that gaining valuable resources at work may make people happier. Self-determination theory posits that individuals have a set of basic psychological needs – namely competence, autonomy, and relatedness – that, once fulfilled, can contribute to make people happier and more satisfied with their life (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000; Sheldon, Ryan, & Reis, 1996). Although individual disposition plays a critical role in influencing people's happiness (Diener, Sandvik, & Pavot, 1991; Lyubomirsky, 2001), several studies have shown that the social environment can also play a crucial role in shaping people's happiness, especially when it provides resources that fit with individuals' needs, preferences, and expectations (Schachtel, 1954).

In this study, we focus on the financial resources provided by organizations that can help employees enhance their standard of living, such as supplementary health coverage, retirement and housing allowances and assistance in case of unemployment. Gaining such work resources can be particularly important to make people happier, as these resources satisfy employees' primary physiological and psychological needs and maintain and/or

improve their standard of living. With the Chinese economy still in a stable state of continuous growth (Ding & Tay, 2016), we do not expect external environment changes to interfere with the following hypothesis:

H2: Work resources are positively associated with life happiness.

Work Resources and Civic Engagement

Work has been found to be a source of social integration facilitating community participation (Milliken et al., 2005; Wilson & Musick, 1997). Wilson and Musick (1997) have demonstrated that work experiences can give people the necessary skills to perform better in their local community. Consequently, we hypothesize that work resources can facilitate people's participation in the local community as they make employees more resourceful and thereby capable of successfully accommodating multiple-role demands (Ten Brummelhuis & Bakker, 2012). Moreover, since a person's repertoire of resources can increase when he/she is employed in an fulfilling job (Greenhaus & Powell, 2006), and since people are more likely to invest in additional activities when they have a broad range of resources at their disposal (Halbesleben et al., 2014), we suggest that acquiring resources at work will favor a higher level of participation in the local community. We believe that receiving financial resources from the organization for healthcare, housing and retirement, can help employees to satisfy their primary needs and thereby become more psychologically available to devote attention and energy to other activities (Russo, Sheigtman, & Carmeli, 2016), such as contributing to the local community. This is consistent with recent motivational research (e.g., Pink, 2011) showing that when people receive fair compensation, they have more cognitive resources to dedicate to other activities and thrive. Thus, we hypothesize the following:

H3: Work resources are positively associated with civic engagement.

Life Happiness and Health

Subjective wellbeing, reflected in perceptions of job satisfaction and life happiness, can influence people's cognitive and affective evaluations of their lives, thus contributing positively to their health (Diener, 2000). Indeed, the relationship between happiness and health is well documented in the literature (Cohn, Fredrickson, Brown, Mikels, & Conway, 2009; Danna & Griffin, 1999). The positive feelings resulting from participation in different activities can also promote greater wellbeing (Culbertson, Fullagar, & Mills, 2010). This aligns with recent research on positive psychology (Seligman, Steen, Park, & Peterson, 2005) showing that people who have a more balanced life, i.e. those who actively participate in both work and non-work domains, may benefit from greater psychological resources and positive energy (Haar et al., 2014; Russo et al., 2016).

Consistently, in this paper we assert that people who feel happy experience better physical and mental health. Importantly, even though the literature distinguishes between physical and mental health, it is widely accepted that both dimensions of health are important to life happiness and life satisfaction (Diener, Emmons, Larsen, & Griffin, 1985; Salomon et al., 2003). Happiness and health are associated via complex relationships (Grant, Christianson, & Price, 2007). We are aware that a reciprocal impact can take place, when happiness leads to better health, including physical health (Veenhoven, 2008). However, we distinguish mental health from happiness, in line with recent research (Abdel-Khalek, 2006; Cheng & Furnham, 2001), as the literature suggests that while certain antecedents may predict both constructs, the relationships are different for different sets of antecedents (Furnham & Cheng, 1999).

Happy people live a state of relative harmony and positive mood that can enhance their perception of fit between their current and ideal life situations (Greenhaus & Allen, 2011). Moreover, happiness can activate a resource gain spiral, as happy people are likely to experience lasting positive emotions (Lyubomirsky, King, & Diener, 2005), which generates

optimal psychological conditions for a successful, healthy life. Lyubomirsky and colleagues (2005) argued that because they are likely to experience positive emotions more frequently, happy people are more likely to make the most of the present moment, and better able to rest and recover their energy, which has positive repercussions on their physical and mental health. Thus, we hypothesize the following:

H4: Life happiness will lead to better (a) mental and (b) physical health.

The Moderating Role of Income

Finally, we hypothesize that level of income can moderate the relationship between work resources, civic engagement and happiness. More specifically, we contend that the positive relationship between work resources and civic engagement on life happiness will be stronger when individuals have a higher income. We base our reasoning on the corollaries of COR theory (Hobfoll, 1989, 2002), which suggest that people are more likely to develop and accumulate resources when they already have a broad set of resources at their disposal (Halbesleben et al., 2014). More specifically, Halbesleben and Wheeler (2015) posit that an individual's set of initial resources is crucial to obtain further resource gains, as resources operate like a motivator, convincing people that the effort to invest in further activities will be successful given the set of resources already at their disposal, thereby leading them to engage in rather than disengage from new activities (Halbesleben et al., 2014). As an illustration, someone might be considering switching to a part-time job to devote more time to family, personal hobbies or civic engagement (e.g. a political campaign). If they can count on good financial assets or their partner's income (i.e., have sufficient available resources), they might be more likely to pursue their personal goal and become happier. Therefore, we contend that people might be happier when they have a broad set of initial resources at their disposal (e.g. high income) as they can invest more effectively in activities that enhance their happiness (e.g. helping others) (Wilson & Musick, 1997). Similarly, we contend that people may feel

happier when acquiring important resources at work in presence of high income, because they may perceive that these further resources will have significant generative effects, enabling more involvement in goal pursuits and greater wellbeing. Thus, we hypothesize the following:

H5: The level of income will moderate the relationships presented in hypotheses 1–2, so that the positive effects of work resources and civic engagement on happiness will be stronger in the presence of higher income levels.

Method

Data Collection

Data for this study were from the 2008 Societal Studies survey conducted by the Chinese National Survey Research Center. The survey employed a stratified sampling technique using China's fifth census of 2000 as sampling frame. It included the 969 most crowded neighborhoods (*ju wei hui* in Chinese) in 125 cities across China. Each neighborhood was assigned a quota of households based on the population of that neighborhood as a proportion of the total population of all 969 neighborhoods. The researchers then selected 11,000 households randomly using the residence records in the sampling frame. One adult person was randomly selected from each sampled household to serve as respondent. Survey administrators visited each household after 18:00 on weekdays or after 14:00 during weekends and holidays to maximize participation rate. Of the 10,331 respondents, 10,045 (97.23%) provided their annual income and occupation information. Gender was evenly distributed (52.6% of respondents were male). The age of the respondents ranged from 18 to 62 ($mean = 38.47$, $SD = 9.21$). Most respondents were married (84.6%). Family size was quite small as 50.4% of respondents had one child ($mean = 3.13$, $SD = 1.55$). Average working hours per week was of 51.8 hours ($SD = 15.51$). Most participants had completed at least secondary education (90%) and had a full-time job (98.1%); 8.33% of the

participants worked in the public sector and 12.36% were self-employed. The remaining (79.31%) worked in the private sector, and were representative of most major industries.

Measures

Work resources. Seven items were used to measure respondents' perceptions of resources acquired at work. Respondents indicated the extent to which their company provided them with extra financial resources, in addition to salary, including health, retirement, unemployment and housing allowances. A sample item is: "My company provides me with additional life insurance endowment". The Cronbach's alpha was 0.89. Two within-construct item covariances between health and retirement insurances were measured. EFA Results suggest that these seven items are loaded on one factor, explaining 61.79 percent of variance.

Civic engagement. The survey measured civic engagement by asking participants to report the frequency of their participation in five different civic activities in the last 12 months, including local associations, arts and recreation activities, religious services, parent-child campaigns and volunteering/philanthropy activities. A sample item is: "During my spare time, I take part in philanthropy/volunteering (activities to help the poor, social relief) other than in my workplace". The Cronbach's alpha was 0.77. EFA results suggest that these five items are loaded on one factor, explaining 54.43 percent of variance.

Life happiness. Four items were used to measure happiness drawing on the Hills and Argyle's scale (2002). A sample item is: "I often experience joy and elation". The Cronbach's alpha was 0.85. EFA results suggest that these four items are loaded on one factor, explaining 48.75 percent of variance.

Physical health. Four items of the short-form brief pain inventory were used to measure physical health (Cleeland & Ryan, 1994). Respondents indicated whether any physical issues/pain had interfered with their daily activities, normal work, social interaction

and sleep in the last month. A sample item is: "Did health issues interfere with your daily activities (for example walking or climbing upstairs)?" Cronbach's alpha was 0.89. The physical health score was standardized ($mean = 0$, $SD = 1$).

Mental health. Five items from the simplified version of the Chinese Mental Health Inventory (Wu, 1984) were used to measure mental health. Respondents indicated whether any emotional issue had interfered with their daily activities in the last month. A sample item is: "Were you bothered by any emotional issues (anxiety, depression or anger) last month?". The Cronbach's alpha was 0.90. Finally, the mental health score was standardized ($mean = 0$, $SD = 1$).

Income. Respondents reported their annual net income. Then, following recommendations by Aiken and West (1991) and Little, Bovaird and Card (2007) regarding moderating effects, we created a new discrete variable capturing the respondents' level of income with the following values: 1 for "low-income" if annual net income was below that of the 25th percentile of annual net income of the whole sample; 2 for "middle-income" if annual net income was between the 26th and 50th percentile; 3 for "upper-middle-income" if annual net income was between the 51st and 75th percentile; and 4 for "high-income" if annual net income was above the 75th percentile.

Control variables. We also controlled for age, marriage (1 for married and 0 for otherwise), gender (1 for female and 0 for male), educational level (1 for primary school, 2 for high school, 3 for college and 4 for post-graduate) and working hours per week.

Analysis

To control for common method bias, we employed the Harman's single factor test. The EFA results showed that a single factor explained only 25.20 percent of the variance in the first model with three predictors (work resources, civic engagement, life happiness) and physical health, and 25.21 percent in the second model with the four above-mentioned

predictors and mental health. We then tested the two single latent variable CFA models with the four predictors and, respectively, physical health and mental health. Both models fitted the data poorly. Finally, we conducted the common latent factor test. We compared the standardized regression weights between the models with a common latent factor and those without. None of the differences was greater than 0.20. Common variants were 0.14 percent in the model with physical health and 0.15 percent in that with mental health. Therefore, we can safely conclude that common bias was not a significant issue in our model.

Our model, illustrated in Figure 1, consists of a moderated mediation with two independent variables (work resources and civic engagement), one mediator (life happiness), one moderator (income), and two outcomes (physical and mental health). As far as we know, no available statistical package (e.g. PROCESS macro for SPSS, Hayes, 2013) can handle two independent variables simultaneously. Therefore, we followed the approach outlined by Little and colleagues (2007) to estimate our research models with structural equation modelling techniques.

Insert Figure 1 about here

Results

Table 1 shows the means, standard deviation, and correlations for the study's variables.

Insert Table 1 about Here

We first estimated the structural equation model with the full sample. The measures of model fit indicate that the structural models fit the data quite well (Model 1a and 1b in Table

2, CFI > .95 and RMSEA < .05). The unstandardized structural coefficients are summarized in Table 3. Both work resources and civic engagement were positively associated with life happiness ($\beta = .09, p < .01$ and $\beta = .14, p < .01$ respectively in Model 1a; $\beta = .15, p < .01$ and $\beta = .20, p < .01$ respectively in Model 1b). Happiness was positively associated with physical ($\beta = .82, p < .01$ in Model 1a) and mental health ($\beta = .77, p < .01$ in Model 1b). The covariance coefficients between work resources and civic engagement are identical and statistically significant in both models ($\phi = .04, p < .01$). Age ($\beta = -.05, p < .01$), while working hours per week ($\beta = -.01, p < .01$) are weakly and negatively associated with life happiness. Marriage ($\beta = .16, p < .01$) and education ($\beta = .10, p < .01$) are positively associated with life happiness while gender is not significant at the 5 percent level ($\beta = .02, p > .10$).

Next, we tested the robustness of our findings using the double cross-validation approach (Bagozzi & Yi, 1990; Byrne, 2010). We randomly split the full sample into a testing and validation sub-samples (50% vs. 50%). Then we first estimated an unconstrained structural equation model with the two random sub-samples respectively (see Table 2). We compared the regression weights with Gaskin's Stats Tools Package (2015). The Z-test results in Table 4 indicated that the regression weights of these two sub-samples were qualitatively similar. Finally, we estimated a model that imposed invariance constraints between these two random sub-samples. The omnibus Chi-square test results in Table 4 ($\Delta\chi^2 = 4.95, \Delta df = 4, p > .10$ with physical health and $\Delta\chi^2 = 4.74, \Delta df = 4, p > .10$) suggest with 95% confidence that there was no significant difference between these two models. Therefore, we conclude that our analyses are robust and hypotheses 1–4 were supported.

Then, we followed the guidelines of Baron and Kenny (1986) and Kenny, Kashy and Bolger (1998) to test whether life happiness mediated the relationship between our predictors and physical and mental health. We compared the fully mediated model (Model 1a and 1b)

with the partially mediated model (Model 2a and 2b), in which paths indicating the direct effects of work resources and civic engagement on physical and mental health respectively were added to the structural models. The values of the omnibus chi-square test were very small ($\Delta\chi^2 = 134.08$, $\Delta df = 2$ between Model 1a and 2a; $\Delta\chi^2 = 58.84$, $\Delta df = 2$ between Model 1b and 2b), suggesting that the full mediation models were significantly different from the partial mediation models. Furthermore, the additional paths from work resources to physical and mental health were not significant at the 5 percent level ($\beta = .07$, $p = .06$ in Model 2a and $\beta = .00$, $p = .96$ in Model 2b). Civic engagement was significantly associated with physical health ($\beta = .38$, $p < .01$ in Model 2a) but weakly associated with mental health ($\beta = .16$, $p < .01$ in Model 2b). Therefore, the parsimonious full mediation models were preferable to the partial models (Little et al., 2007).

Results of the moderating analyses

To test the moderating effect of income (Hypothesis 5), we divided the full sample into four subsamples: (i) low, (ii) middle, (iii) upper-middle, and (iv) high income (see Table 3 for detailed results of the models across the four subsamples). In the (i) low-income subsample, the relationship between civic engagement and life happiness was significantly positive ($\beta = .16$, $p < .01$ in Model 3a and $\beta = .14$, $p < .01$ in Model 3b), whereas that between work resources and life happiness was not statistically significant ($\beta = -.05$, $p > .10$ in Model 3a and $\beta = -.04$, $p > .10$ in Model 3b). For the (ii) middle-income subsample, work resources were significantly associated with life happiness ($\beta = -.41$, $p < .01$ in Model 4a and $\beta = -.41$, $p < .01$ in Model 4b), whereas civic engagement was not significantly associated with life happiness ($\beta = -.05$, $p > .10$ in Model 4a and $\beta = .05$, $p > .10$ in Model 4b).

In the (iii) upper-middle-income subsample, work resources were not significantly associated with life happiness ($\beta = -.06$, $p > .10$ in Model 5a and $\beta = -.05$, $p > .10$ in Model 5b), and nor was civic engagement ($\beta = .07$, $p > .01$ in Model 5a and $\beta = .06$, $p > .01$ in

Model 5b). In the (iv) high-income subsample, the relationship between work resources and life happiness was not statistically significant ($\beta = -.01, p > .10$ in Model 6a and $\beta = -.00, p > .10$ in Model 6b), whereas that between civic engagement and life happiness was significant and positive ($\beta = .10, p < .01$ in Model 6a and $\beta = .10, p < .10$ in Model 6b). The covariance coefficients were stronger in the upper-middle and high-income sub-samples ($\phi = .02, p < .01$; $\phi = .02, p < .01$ respectively) than in the low and middle-income sub-samples ($\phi = .01, p < .01$; $\phi = .01, p < .01$).

We continued to examine the moderating effects of income, first by following the multiple group comparison approach developed by Byrne (2010) and Joreskog (1971) to compare (a) six unconstrained models, each estimating two sub-samples (i.e. low vs. middle income, low vs. upper-middle income, low vs. high income, middle vs. upper-middle income, middle vs. high income, and upper-middle vs. high income) and (b) six models imposing between-group invariance constraints. The values of the omnibus chi-square tests shown in Table 4 rejected the non-invariance hypotheses at the 5% level in the pairs of low vs. middle (53.27/53.27, $df = 3, p < .01$), low vs. high (12.17/15.61, $df = 3, p < .01$), middle vs. upper-middle (37.48/37.73, $df = 3, p < .01$), middle vs. high (76.17/79.91, $df = 3, p < .01$), and upper-middle vs. high (19.29/20.87, $df = 3, p < .01$) income subsamples. The values of the omnibus chi-square tests between low and upper-middle-income (6.65/6.42, $df = 3, p < .10$) was also marginally significant at the 10% level.

Finally, we compared the structural coefficients between these six pairs of sub-samples with Gaskin's Stats Tools Package (2015) using the two-sample Z-test. The comparisons of regression weights suggested significant between-group differences (see Table 4) in the paths from work resources to happiness between low and middle (-4.73, $p < .01$), middle and upper-middle (4.69, $p < .01$), middle and high (6.18, $p < .01$), and upper and high (1.99, $p < .05$) income subsamples; in the paths from civic engagement to life happiness between low

and middle (-4.65, $p < .01$), low and upper-middle (-1.97, $p < .01$), middle and upper-middle (3.27, $p < .01$), and middle and high income subsamples (4.09, $p < .01$). That is to say, the relation between work resources and happiness in the middle-income subsample was significantly different and lower than those in the other three subsamples. Thus, receiving more work resources made people in the middle-income group significantly less happy in their life than the other respondents. This is probably because receiving more resources at work could lead to disproportionately more responsibilities and work pressure for such employees, who are usually overworked officer workers and junior managers.

Regarding civic engagement, the positive association between civic engagement and life happiness was stronger in the low-income subgroup and slightly weaker in the high-income subgroup. However, the difference between the low and high income subgroups was not statistically significant. Instead, the association between civic engagement and life happiness differed significantly between the middle (insignificantly negative) and upper-middle (insignificantly positive) subgroups and between these groups and the low and high-income subgroups. Participating more in civic activities significantly increased the level of happiness for low and high-income individuals but not for those in the middle and upper-middle income groups. This is probably because these activities may use up the time and energy of overworked middle-income employees, offsetting the positive effect on happiness. In short, our result did not fully support Hypothesis 5 on the moderating effect of income, as the results indicate that the positive effects of work resources and civic engagement on life happiness varied across people of different revenues: the results suggest curvilinear relationships rather than the linear moderation anticipated.

Insert Tables 2, 3 and 4 about Here

Discussion

The goal of this paper was to test the impact of work-non-work enrichment, measured by work resources and civic engagement, on life happiness and physical and mental health in China. Our results demonstrate that perceiving to gain valuable resources at work was positively related to individuals' participation in the local community. Similarly, participating in the local community was positively related to greater perception of life happiness, which in turn improved people's physical and mental health. Finally, our results demonstrate that the relationships between our predictors and life happiness was moderated by income level. Unlike what we predicted, the results demonstrate that the positive effects of civic engagement on happiness were curvilinear, namely stronger for low- and high-income individuals, but weaker (and in some cases irrelevant) for middle-income ones. We found the same results for work resources, which, while positively associated with happiness in the whole sample, were significantly and negatively associated with happiness in the middle-income subgroup. As mentioned above, this may be because middle-income Chinese could perceive the fact that they receive more resources from their employer as an obligation to reciprocate through greater engagement and responsibilities at work. This might consequently generate a negative psychological effect that could increase rather than reduce stress among this segment of the Chinese population, which already work longer hours than other segments¹ as indicated by the China Labor Bulletin (2006).

Theoretical contribution

This paper makes a significant contribution to research on the implications of the work-non-work intersections on people's happiness and health (Matthews, Wayne, & Ford,

¹A deeper analysis on the number of working hours across the four subgroups confirms that middle income Chinese people worked significantly longer hours (*mean* = 53.71 hours/week, *SD* = 17.07, 25-75 percentile = 42-68, maximum = 168) than the other subgroups (low income → *mean* = 53.80 hours/week, *SD* = 16.98, 25-75 percentile = 40-69, maximum = 112; upper-middle income → *mean* = 51.23 hours/week, *SD* = 13.87, 25-75 percentile = 40-60, maximum = 110 hours; high income → *mean* = 48.30 hours/week, *SD* = 12.96, 25-75 percentile = 39.5-55, maximum = 120 hours).

2014). To the best of our knowledge, this is the first paper to demonstrate empirically that major benefits of positive work-non-work combinations extend to people's level of happiness. This is remarkable, as no previous study has demonstrated the link between enriching work-community experiences and happiness (see Crain & Hammer, 2013 for a review of the outcomes associated with work-family enrichment).

This paper also contributes to validate certain basic assumptions of work-home enrichment and COR research. By considering the combined effect of work and non-work experiences, this paper presents a more complete picture of the generative effects that positive work and non-work experiences can have on people's wellbeing. Our results support the idea that gaining valuable resources in one area (in our case at work) can have a generative effect, creating a resource gain spiral (Hobfoll, 2002), which might lead people to invest with more effort in other areas such as the community (Halbesleben et al., 2014; Milliken et al., 2005; Wilson & Musick, 1997; Voydanoff, 2001).

Finally, we tested our model on a wide sample of Chinese employees, employed in different occupations and with different levels of income, revealing an important boundary mechanism in the relationship between people's participation in the local community and health and happiness, i.e. the level of income. We found that both poor and wealthy people were more likely to experience happiness when participating in their local community, maybe because they perceived their life to be more meaningful when participating in community development. Our paper's results concerning the generative effects on wealthy people provide empirical support for an important corollary of COR theory, suggesting that people are more likely to invest in further activities when they have at their disposal a broad repertoire of personal and contextual resources (Halbesleben et al., 2014).

The fact that positive work-non-work experiences were not equally beneficial for all segments of the population is another important contribution of our study. It demonstrates

that the work-non-work enrichment process is not identical for all, as people may react differently according to their personal condition. For instance, for middle-income workers, receiving more resources was not as beneficial as for other segment of the population. This is consistent with prior research showing that the positive effects of other work resources, such as the presence of a family supportive supervisor, are stronger for those who most need such help (Russo, Buonocore, Carmeli, & Guo, 2015).

Practical Implications

This paper has important practical implications. The main message is that participating in community activities is beneficial to both mental and physical health, as it can generate positive returns in both work and non-work areas. Therefore, we recommend that employers take practical steps to encourage their employees to invest time, energy and skills in both work and non-work activities. For example, employers might begin reducing their expectations in terms of working hours, as this dramatically reduces people's time, energy, and willingness to invest in non-work activities. This is particularly important in China a country notorious for its demanding working conditions and, as our results demonstrate, especially for middle-income workers who undergo the most demanding conditions (Oster, 2014). At the same time, we believe that it is necessary to promote a novel workplace culture that distances itself from an old but still persistent mindset that considers long hours as the most important criterion upon which to judge people's work commitment and that stigmatizes people's non-work interests as a threat to productivity (Greenhaus & Powell, 2017). Such steps could have significant favorable effects by encouraging employees to invest with greater efforts in non-work activities and also removing the fear of negative repercussions in the case of personal involvement in non-work activities. In the long term, we believe that this can also help to create more sustainable workplaces and healthier employees

who have the necessary mental and physical resources to accommodate the work-non-work challenges of turbulent modern times (Greenhaus & Kossek, 2014).

Limitations and future research

Bearing in mind that our data are restricted to the Chinese population, we recommend future cross-cultural comparisons. Given that, very often, Chinese employees are required to engage in volunteer work as a part of their job, working in the local community may not represent a true form of volunteering, and so may be less beneficial (as was the case in our sample for middle-income workers). Another limitation of this study is that we measured individuals' perception of involvement in the local community and work resources rather than making direct observations. Although this is a limitation of many studies focusing on resources, future studies should rely on more reliable data sources to track the number of hours spent in the local community, and collect information from significant others, such as colleagues or partners, to clarify the benefits for the work-life interface emanating from these positive work-non-work interconnections.

We examined the moderating role of income levels. Future research should also examine whether other personal or work characteristics, such as marital status or company status (state-owned vs. private enterprises), can moderate the relationships examined in our study, given that prior research has shown these characteristics to be influential predictors of community participation (Voydanoff, 2001).

A further possible limitation is that, like most models which include work and non-work attitudes, the possibility of reverse causation exists (De Lange, Taris, Kompier, Houtman, & Bongers, 2004). We thus suggest that reverse causation is unlikely to occur in this study, though this is possible, for example, someone who is limited physically may be limited in the types of civic engagement they can pursue, and someone who suffers of mental disorders may be less motivated to help the community, given that energy is expended on

their own mental health. To enable testing for this possible effect will require a longitudinal study following the same people over time.

Finally, the data base is from 2008, thus not updated. Yet, we do not expect that relationships tested in this study regarding attitudes and other work outcomes will change in such time frame.

Conclusions

Improving health and wellbeing at work offers substantial benefits for both individuals and organizations (Danna & Griffin, 1999). We developed and empirically validated a conceptual framework that associates work- and community-related factors to discover the importance of work-non-work enrichment to happiness, and demonstrated the impact of these factors on both mental and physical health. We also found that the effects varied between for people of different income levels, and were significantly lower for middle-income workers. This is an important result, as it sheds new light on the positive effects of work-non-work enrichment, which are not universal but can depend on individual or contextual characteristics.

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Table 1

Correlations, Means, and Standard Deviations

	Mean	SD	1	2	3	4	5	6	7	8	9	10
1. Work resources	1.59	0.32										
2. Civic Engagement	1.35	0.48	.29***									
3. Happiness	2.44	0.52	.13***	.12***								
4. Mental Health	4.03	0.85	.07***	.14***	.27***							
5. Physical Health	3.88	0.50	.08***	.11***	.32***	.84***						
6. Female	.47	.50	.07***	.04***	0.01	.09***	.08***					
7. Age	38.47	9.21	.08***	-.20***	-.05***	-.39***	-.33***	.05***				
8. Working Hours	51.80	15.51	-.19***	-.12***	-.08***	-.06***	-.06***	.06***	-.02**			
9. Marriage	.84	.37	0.00	-.12***	.06***	-.04***	-.02*	-.04***	.18***	.02**		
10. Education	1.76	.65	.37***	.40***	.16***	.26***	.24***	.11***	-.34***	-.16***	-.13***	
11. Annual Net Income	8688.13	12361.90	.35***	.31***	.24***	.15***	.15***	.12***	-.10***	-.10***	-.04**	.37***

***: $p < 0.01$; **: $p < 0.05$; *: $p < 0.10$

Table 2

Model Fit Indicators

Model a=Physical b=Mental	NFI	RFI	CFI	RMSEA	χ^2	df
1a (Full Sample)	0.93	0.91	0.93	0.05	7526.13	249
1b (Full Sample)	0.93	0.91	0.93	0.05	7390.33	249
Mediation Analysis						
2a (Partial Full)	0.93	0.92	0.93	0.05	7391.11	247
2b (Partial Full)	0.93	0.91	0.93	0.05	7331.49	247
Moderating Analysis						
3a (Low Income)	0.93	0.91	0.94	0.05	2479.26	249
3b (Low Income)	0.94	0.92	0.94	0.05	2439.63	249
4a (Middle Income)	0.91	0.92	0.92	0.05	1794.92	249
4b (Middle Income)	0.91	0.88	0.92	0.05	1739.34	249
5a (Upper Middle Income)	0.89	0.86	0.90	0.06	2322.04	249
5b (Upper Middle Income)	0.89	0.86	0.90	0.06	2299.07	249
6a (High Income)	0.87	0.83	0.88	0.06	2549.23	249
6b (High Income)	0.88	0.84	0.89	0.06	2482.67	249

Table 3

Structural Coefficients in Full, High (>75 percentile), Upper-Middle (75-50 percentile), Middle (50-25 percentile) and Low (<25 percentile) Income Samples

	Full Sample	Random 1	Random 2	Low	Middle	Upper-Middle	High
Work Resources→Happiness	.09(.02) ***	.07(.03) ***	.08(.03)* **	-.05(.09)	- .41(.07) ***	-.06(.04)	- .01(.03)
Civic engag. →Happiness	.14(.02) ***	.11(.03) ***	.11(.03)* **	.16(.04) ***	-.05(.05)	.07(.04)	.10(.02) ***
Age→Happiness	-	-	-	-	-	-	-
Married→Happiness	.05(.01) ***	.05(.01) ***	.05(.01)* **	.03(.01) **	.04(.01) **	.09(.04)* **	.02(.01)
Education→Happiness	.16(.02) ***	.14(.02) ***	.14(.02)* **	.17(.03) ***	.12(.04) ***	.13(.03)* **	.08(.03) ***
Working Hours→Happiness	.10(.01) ***	.12(.01) ***	.12(.01)* **	.12(.02) ***	-.00(.03)	-.00(.02)	.06(.02) ***
Female→Happiness	-	-	-	-	-	-	.00(.00)
Happiness →Physical health	.00(00)* **	.00(00) ***	.00(00)* **	.00(00)* **	.00(00)* **	.00(00)* **	.00(.00)
Work resource↔ Civic engag.	.02(.01)	.04(.02) **	.04(.02)* *	- .06(.02) **	.02(.03)	-.00(.02)	- .00(.02)
Happiness →Mental Health	.82(.03) ***	.87(.04) ***	.87(.044) ***	.77(.06) ***	.75(.06) ***	.80(.06)* ***	.51 (.07)** *
Work resources→Happiness	.04(.00) ***	.04(.00) ***	.04(.00)* **	.01(.00) ***	.01(.00) ***	.02(.00)* **	.02(.00) ***
Civic engag. →Happiness	.15 (.02)***	.09(.03) ***	.09(.03)* **	-.04(.09)	- .41(.07) ***	-.05(.04)	.00(.03)
Age→Happiness	.20(.02) ***	.09(.03) ***	.09(.03)* **	.14(.04) ***	-.05(.06)	.06(.04)	.10(.03) ***
Married→Happiness	-	-	-	-	-	-	-
Education→Happiness	.05(.01) ***	.05(.01) ***	.05(.01)* **	.03(.01) **	.05(.02) ***	.10(.01)* **	.02(.01)
Working Hours→Happiness	.16(.02) ***	.15(.02) ***	.15(.02)* **	.16(.03) ***	.12(.04) ***	.15(.03)* **	.09(.03) ***
Female→Happiness	.11(.01) ***	.12(.01) ***	.12(.01)* **	.12(.02) ***	.00(.03)	.00(.03)	.06(.02) ***
Happiness→Mental Health	-	-	-	-	-	-	.00(.00)
Work resource↔ Civic Engag.	.00(.00) ***	.00(.00) ***	.00(.00)* **	.00(.00) ***	.00(.00) ***	.00(.00)* *	.00(.00)
	.02(.01)	.04(.02) ***	.04(.02)* **	- .06(.02) **	-.02(.03)	-.01(.02)	- .00(.02)
	.77(.03) ***	.82(.04) ***	.82(.04)* **	.73(.05) ***	.72(.05) ***	.76(.05)* **	.62(.06) ***
	.04(.00) ***	.04(.00) ***	.04(.00)* **	.01(.00) ***	.01(.00) ***	.02(.00)* **	.02(.00) ***

***: p<.01; **: p<.05; *: p<.10

Table 4

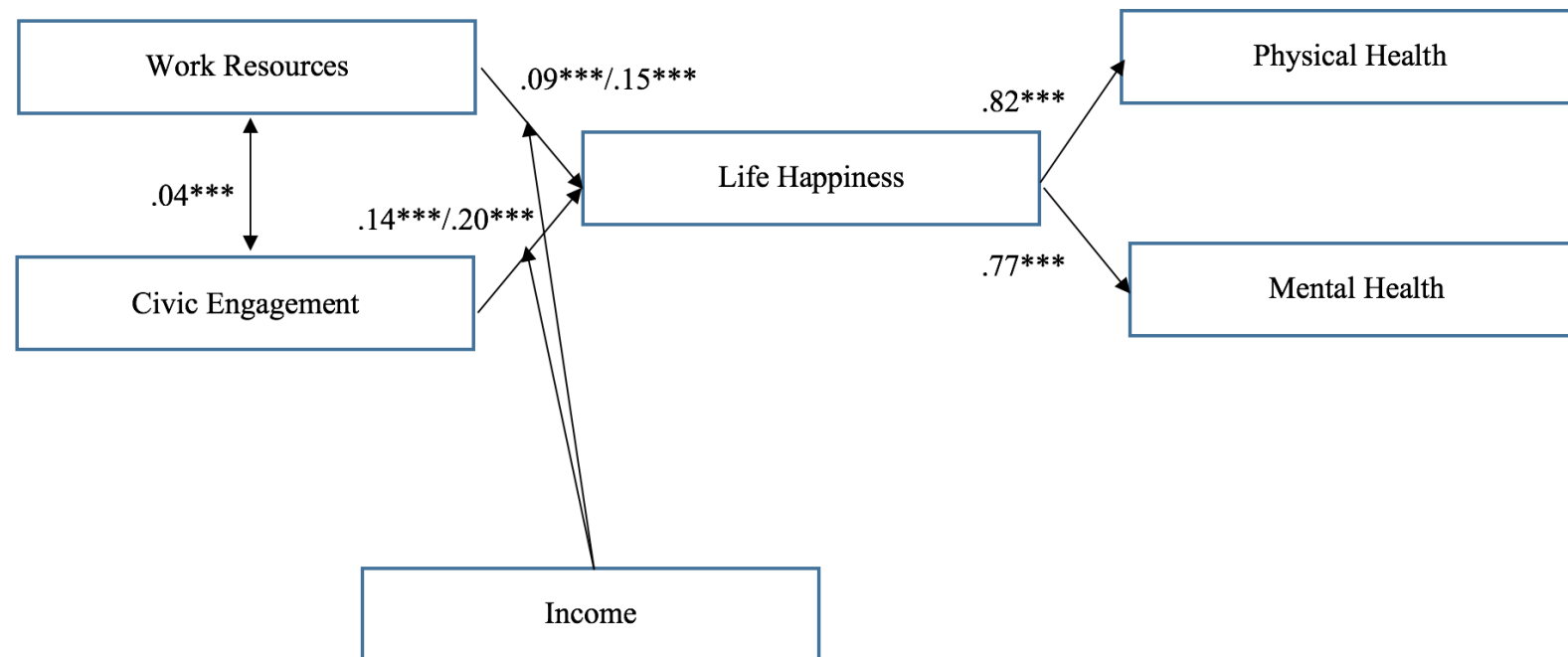
Z-Tests of Multiple Group Comparison

Path	Random 1 vs. 2	Low vs. Middle	Low vs. Upper	Low vs. High	Middle vs. Upper	Middle vs. High	Upper vs. High
Work resources →Happiness	1.42	- 4.73** *	- 1.19	.02	4.69***	6.18** *	1.99**
Civic engagement →Happiness	.62	- 4.65** *	- 1.97 **	-1.44	3.27***	4.09** *	.81
Happiness →Physical health	1.23	.64	.50	- 3.17** *	-.17	- 3.73** *	- 3.76** *
χ^2 (df) test between Unconstrained & Constrained	4.95(4)	53.27(3)***	6.65 (3)*	12.17(3) ***	37.48(3)* **	76.17(3)***	19.29(3)***
Work resources →Happiness	1.35	- 4.73** *	- 1.19	.02	4.69***	6.18** *	1.99**
Civic Engagement →Happiness	.83	- 4.65** *	- 1.97 **	-1.44	3.27***	4.09** *	.81
Happiness →Mental health	1.13	.63	.13	-3.67**	-.53	- 4.21** *	- 3.97** *
χ^2 (df) test between Unconstrained & Constrained	4.74(4)	53.25(3)***	6.42 (3)*	15.61(3) ***	37.73(3)* **	79.91(3)***	20.87(3)***

***: $p < .01$; **: $p < .05$; *: $p < .10$

Figure 1

The hypothesized research model



Notes: The coefficients indicated on the left are for full-sample model with physical health as outcome, while the ones on the right are for the full-sample model with mental health as outcome

Highlights

- We examine the effect of work resources and civic engagement on happiness and health
- We use a representative sample of 10,331 people in China.
- We identified a curvilinear moderation of income on the relationship between the antecedents and happiness
- We found that civic engagement is more beneficial for low- and high-income people.
- We found that middle class people experience less happiness in presence of work resources.