**A Moderated Mediation Approach of Expatriate Subjective Well-being: Roles of Subjective Support and Spouse Adjustment**

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**Abstract.** Through an online survey of current Chinese expatriates with 155 valid self-report questionnaires returned, our study verifies that expatriate SWB is significantly related to perceived stress (PS) and its sub-dimensions, job satisfaction (JS), social support and its sub-dimensions, expatriate adjustment, spouse adjustment, environmental comfort of country of residence; then reveals the existing moderated mediation approach that PS influences SWB through JS, whereas subjective support plays a moderating role in both PS - SWB and PS - JS relationship. Plus, expatriate adjustment and spouse adjustment could predict mutually, as well predict PS and SWB.

**Introduction**

More and more enterprises are accelerating their pace of internationalization, trying to catch up with the rapid development of economic globalization. According to the newest *Statistical Bulletin of China's Outward Foreign Direct Investment* [1], China’s outbound direct investment increased 18.3 percent in 2015 to hit a record high of 145.67 billion US dollars. By the end of 2015, more than 30,000 China’s foreign direct investment enterprises have distributed in 188 countries and regions over the world, which results in massive expatriates being active in the international arena. As for the international human resource management has become the major strategic tool for multinational enterprises to enhance their competitive strength, the topic of expatriate management has been dragged into the public focus.

In the field of Organizational Behavior research, employee well-being is critical to the survival and development of the organizations [2]. Empirical researches show that higher level of employee well-being indicates higher employee commitment, work performance, job satisfaction, individual health, creativity, problem-solving abilities and organizational loyalty, as well as lower job burnout and resignation [3]. Therefore, to study the influencing factors of employee well-being is comparatively important for the long-term development of employees and organizations. Moreover, expatriate as a special type of employee which lack of concern in previous researches, should receive more attention in future studies; and exploring the mechanism between their stress and well-being can be the initial stage of enhancing the progress of Chinese international human resource management and the competitiveness of our multinational enterprises.

**Data and Analysis**

Previous researches have already revealed the relationship between subjective well-being (SWB), perceived stress (PS) and job satisfaction (JS). As one sensitive predictor of SWB [4], JS has significant negative correlation with PS [5], and serves as a mediator in the path from stress to well-being [6]. And for the expatriate sample, PS as a valid predictor of the key sub-dimension of SWB: life satisfaction, can affect both expatriate SWB and spouse SWB [7]. Since expatriate is
somewhat a special group for its frequent long-time stay in foreign countries and its unfamiliar, lonely working and living environment, which could form quite different social relations from people ordinarily working inside their home country. In view of this, the impact of social support (SS) is particularly worthy of further exploration.

We firstly verify the path that Chinese expatriate PS influences SWB through the mediation of JS by using the data collected from 43 countries and regions, 155 valid questionnaires of efficiency 96.3%. And the variables and measurement as follows:

**SWB.** Campbell’s index of well-being of 9-item and 7-point Likert type scale has been used. And the internal consistency reliability of the scale in this study was 0.87.

**JS.** We have chosen Agho’s 6-item measure with a 5-point Likert type scale of overall JS. And the reliability of the scale in this study was 0.96.

**PS.** We have chosen the revised Chinese version of Perceived Stress Scale, which consists of two sub-dimensions: sense of tension and sense of out of control; and 14 items in total responded to on a 5-point Likert type scale, with the internal consistency reliability in this study 0.70.

**SS.** The revised Chinese version of Social Support Rating Scale of 10-item has been used, which consists of three sub-dimensions: subjective support, objective support and availability of support; with the internal consistency reliability of the scale in this study 0.70.

Table 1. Regression analysis of mediating effect of job satisfaction.

<table>
<thead>
<tr>
<th>Dependent variables</th>
<th>Job satisfaction</th>
<th>Subjective well-being</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
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<tr>
<td>Control variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-0.01</td>
<td>-0.07</td>
</tr>
<tr>
<td>Type of work unit</td>
<td>0.15†</td>
<td>1.91</td>
</tr>
<tr>
<td>Working seniority</td>
<td>0.05</td>
<td>0.37</td>
</tr>
<tr>
<td>Marital status</td>
<td>0.17†</td>
<td>1.82</td>
</tr>
<tr>
<td>Independent variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived stress</td>
<td>-0.54**</td>
<td>-7.62</td>
</tr>
<tr>
<td>Subjective support</td>
<td>0.06</td>
<td>0.70</td>
</tr>
<tr>
<td>Objective support</td>
<td>0.06</td>
<td>0.87</td>
</tr>
<tr>
<td>Availability of support</td>
<td>0.15*</td>
<td>2.12</td>
</tr>
<tr>
<td>PS × Subjective support</td>
<td>-0.11†</td>
<td>-1.66</td>
</tr>
<tr>
<td>PS × Objective support</td>
<td>0.07</td>
<td>0.87</td>
</tr>
<tr>
<td>PS × Availability of support</td>
<td>0.07</td>
<td>0.94</td>
</tr>
<tr>
<td>Job satisfaction</td>
<td>0.52**</td>
<td>8.86</td>
</tr>
<tr>
<td>ΔR2</td>
<td>0.07</td>
<td>0.36</td>
</tr>
<tr>
<td>F</td>
<td>2.75**</td>
<td>13.61**</td>
</tr>
</tbody>
</table>

Note: Sample size N = 155; † indicates p < 0.1, * indicates p < 0.05, and ** indicates p < 0.01.

**Expatriate/Spouse adjustment.** We sorted out the aspects of expatriate/spouse adjustment as: attitude towards foreign assignment, work-life adaptation, cultural adaptation and language skill, from the interview with 11 expatriates in work. Each has 4 items all responded to on a 5-point Likert type scale, with the internal consistency reliability in this study 0.70 and 0.68.

**Environmental comfort.** We also sorted out 2 items based on interviews to respectively measure satisfaction of local environment of expatriate and spouse, with the reliability in this study 0.68.

And the result verifies that Chinese expatriate SWB was significantly related to PS and its two dimensions, JS, SS and its three dimensions, expatriate adjustment, spouse adjustment, environmental comfort of the country of residence, age, type of work unit, working seniority and...
marital status. Then, under the control of the demographic variables (age, type of work unit, working seniority and marital status), hierarchical regression analysis shows that (see Table 1) PS had significant effects both on JS ($\beta=-0.52$, $p<0.01$) and SWB ($\beta=0.57$, $p<0.01$), whereas JS significantly affected SWB ($\beta=0.52$, $p<0.01$). Furthermore, when JS entered the equation, the $\beta$ of PS was reduced to -0.31 ($p<0.01$), which suggested that JS played a partial mediating role between PS and SWB.

SS consists of three sub-dimensions: subjective support, which refers to emotional experience and degree of satisfaction that the individual feels respected, supported, understood in society; objective support, actual or visible assistance and social networks; and availability of support, the use of support by the individual [8]. It is a universal predictor and a significant environmental variable of SWB [9], and it has often been chosen as the main moderator when discussing stress - well-being relationship [10]. However, there is no conclusive evidence on whether SS has a moderating effect in PS - SWB relationship, especially lacks of the consistent result in the working field [11]; in addition, previous studies often explored the regulatory effect of SS as a whole, but seldom took the influence of its sub-dimensions into consideration, only confirming that among the three sub-dimensions subjective support mostly and significantly correlated with SWB and its sub-dimensions [12]. Therefore, this paper proposes Hypothesis 1: Subjective support, objective support and availability respectively have a moderating effect of Chinese expatriate’s PS - SWB and PS - JS relationship. As can be seen from Table 1, availability of support affected JS ($\beta=0.12$, $p<0.10$) and SWB ($\beta=0.13$, $p<0.05$), whereas subjective support significantly affected SWB ($\beta=0.21$, $p<0.01$). Besides, there was a visible interaction between PS and subjective support (Model 3: $\beta=-0.11$, $p<0.10$; Model 6: $\beta=-0.11$, $p<0.10$), and no significant interaction between PS and other two sub-dimensions of SS (Model 3: $\beta=0.07$, $p>0.10$; Model 6: $\beta=0.07$, $p>0.10$). Specifically, when subjective support was high, JS and SWB were reduced faster with the increasing of PS; though regardless of the level of PS, respondents with higher subjective support had higher JS and SWB. Since previous studies used $p=0.10$ as a statistically significant criterion of mediating effect [13], the mediating effects of objective support and availability of support were not significant; whereas subjective support played as a moderator in both PS - SWB relationship and PS - JS relationship, partially supporting Hypothesis 1. However, it is noteworthy that when JS entered the equation, the moderating effect of subjective support became insignificant ($\beta=-0.05$, $p>0.10$), suggesting that subjective support moderated SWB entirely through JS.

![Figure 1. A moderated mediation approach of Chinese expatriates’ PS - SWB relationship.](image)

As with all self-report data, we examined and confirmed that the hypothesized moderated mediation model shown in Fig. 1 not being affected by common method variance, with all of the paths that were significant when common method variance was not controlled remained significant even when common method variance was controlled.

Moreover, for the management of expatriate personnel, some studies proposed the competency model of expatriate [14], including factors such as adjustment, oral communication ability, stress coping, cross-cultural openness and foreign language skill. Among them, expatriate adjustment refers to their cross-cultural adaptation, assessing their psychological match and comfort level when facing cultural differences in the country of residence [15], and includes two sub-dimensions: psychological adaptation, refers to expatriate physical health, mental health and SWB in a cross-cultural context; socio-cultural adaptation, assuming the ability to adapt to the local environment [16]. Precious studies have shown that expatriate cross-cultural adaptation could significantly predict JS and life satisfaction [17]; whereas it would be influenced by working experiences of foreign assignment, language skill, organizational support, spouse/family support, spouse adjustment, stress level, cultural values of country of residence etc. [17,18], among which the most important one is spouse adjustment [15].
Domestic studies seldom consider the impact of family (mainly refers to spouse) support and adjustment on expatriate SWB and JS; some researchers even believe that one obvious difference between Chinese and Western enterprises is that Chinese expatriate is not facing spouse adjustment problem [19]. Therefore, this paper proposes Hypothesis 2a: Expatriate adjustment and spouse adjustment can significantly predict expatriate SWB, JS and PS, whereas spouse adjustment can also significantly predict expatriate SS; and Hypothesis 2b: Expatriate adjustment and spouse adjustment are significantly correlated, and serve as the mutual predictors.

Then the results of regression analysis supported Hypothesis 2a as: expatriate adjustment positively predicted SWB ($\beta$=0.42, $p<0.01$) and JS ($\beta$=0.34, $p<0.01$), whereas negatively predicted PS ($\beta$=-0.18, $p<0.05$) and its two sub-dimensions – sense of tension ($\beta$=-0.23, $p<0.01$) and sense of out of control ($\beta$=-0.28, $p<0.01$); spouse adjustment positively predicted expatriate SWB ($\beta$=0.18, $p<0.05$), JS ($\beta$=0.22, $p<0.01$) and SS ($\beta$=0.21, $p<0.05$), whereas negatively predicted expatriate PS ($\beta$=-0.29, $p<0.01$) and sense of out of control ($\beta$=-0.23, $p<0.05$).

In addition, under the circumstance of controlling the demographic variables, we processed the regression analysis by setting expatriate adjustment and spouse adjustment respectively as the dependent variable, and found that: expatriate adjustment significantly predicted spouse adjustment ($\beta$=0.57, $p<0.01$; 30.3% explained), and spouse adjustment also significantly predicted expatriate adjustment ($\beta$=0.54, $p<0.01$; 29.1% explained), which fully supported Hypothesis 2b.

**Discussion and Conclusion**

For JS, this study further confirmed its significant correlation with SWB, PS, SS, expatriate adjustment and spouse adjustment, using the current Chinese expatriate as the sample; also explored its function of being the intermediary path not only when PS affected SWB but also when subjective support moderated SWB.

For SS, the valid predictor of SWB and of JS, which lacks the approach to examine whether its three sub-dimensions could respectively moderate PS - SWB relationship and PS - JS relationship in previous studies, welcomes the evidence that subjective support has significant moderating effect on both the relationships mentioned above, whereas objective support and availability of support not in this study. One of the reasons may lies on the specialty of participants selected, for expatriate has quite different social relations compared with general working group; and data of SS also show that the sub-dimension objective support has higher standard deviation than the other two. However, as for the score of measuring sub-dimension subjective support, its standard deviation may not be extra affected. Moreover, living long-term in an unfamiliar and lonely environment makes expatriate eager to feel supported, respected and understood, which results in more emotional needs of them, assuming subjective support would show a greater impact on them. After all, SS’s moderating effect is studied on the base that individual’s PS level would be regulated by their psychological resources and social resources [10], and when people are situated in a foreign community with social resources relatively difficult to accumulate, the effect of psychological resources, including subjective emotional support, will be expressed more obviously. Last but not least, the common method variance we mentioned before made objective support - SWB relationship weakened, as well availability of support - SWB relationship.

Previous studies have found that one of the determinants of expatriates’ quality of life, work-family coordination and partner satisfaction is their spouse stress level and attitude towards foreign assignments; and SS also has some effects whereas years of foreign service and number of countries of residence not [7]. And positive attitude can positively predict well-being [20]. Our study confirmed and expanded the existing research results in the following ways: Firstly, years of foreign service and number of countries of residence have nothing to do with expatriate SWB, JS, PS and SS; Secondly, SS significantly correlates with expatriate PS negatively, and with their SWB and JS positively; Thirdly, expatriate adjustment can significantly predict SWB and JS positively, and predict PS
negatively; Fourthly, spouse adjustment can significantly predict SWB, JS and SS positively, and predict PS negatively.

According to the results mentioned above, expatriate adjustment and spouse adjustment are very important for international human resources management practice, and they should be classified as the key issues in related policy-making processes, however in the past, the issue of spouse adjustment particularly received far less attention. As time changes, the data that only 3.9% expatriate have spouse accompanying [19] have arrived to 48.5% in our present study, and the trend is still going on. Therefore, the studies focusing on spouse adjustment should also increase accordingly in time, as well the means of research (interview, pair study, follow-up study etc.) and the variables related (spouse well-being, satisfaction, stress level etc.), to conform to the new trends in the field of international human resources, and to achieve more accurate and effective organization management practice.

Furthermore, we also find that spouse attitude towards foreign assignment relates to not only all the main variables (SWB, JS, PS, SS and subjective support) in this study, but also other variables such as: expatriate attitude, work-life adaptation, cultural adaptation and environmental comfort; spouse life adaptation, cultural adaptation, language skill and environmental comfort. It not only has the most obvious correlations of all sub-dimensions of spouse adjustment, but also can predict expatriate SWB, JS, PS and subjective support. Therefore, this study also put forward some practical directions for the international human resources management: to pay due attention to spouse adjustment of expatriate staff; to take effective measures to improve spouse attitude towards foreign assignment; and to help to fulfill spouses’ needs in supporting expatriate service.

Plus, this study has chosen the special group Chinese expatriate as the research object, not following the sample-claiming process of previous studies by focusing on only one multinational enterprise, instead, we have enriched the sources of type of work unit as well as the country of residence of the sample. When exploring the moderated mediation mechanism, we explored in depth and discussed the moderating effect of each sub-dimension of SS. However, this horizontal study has the limitation of small valid sample, which could affect its representativeness. In spite of devoting a lot of time and energy to collect data from different countries through internet, the recovery rate still remains consistent low, according with the average 41% in precious surveys of expatriate [18]. Hope future researches can expand the sample in quantity and longitudinally, to compare and validate the present result. Also, instead of incorporating the variable adjustment into the model, we considered it and its sub-dimensions basing on the actual situation and practical concerns investigated in real foreign assignment, setting the stage for comprehensive and mature scale to measure expatriate adjustment and spouse adjustment in future and discuss the appropriateness and implications of current aspect of them or of cross-cultural adaptation.

In conclusion, this study focusing on the underlying mechanism of Chinese expatriate SWB and PS, not only verifies SWB’s significant correlation with PS and its two sub-dimensions, JS, SS and its three sub-dimensions, expatriates adjustment, spouse adjustment, environmental comfort of the country of residence, age, type of work unit, working seniority and marital status; but also reveals the existing moderated mediation approach that PS influences expatriate SWB through JS, whereas subjective support moderates both PS - SWB and PS - JS relationship; last but not least, expatriate adjustment and spouse adjustment are identified as two valid predictors of PS and of SWB, and could also predict mutually.
References


