

The Relationship between Psychological Contract Fulfillment and Performance of University Physical Education Teachers in Taiwan: The Mediating Effect of Perceived Organizational Support

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Abstract: This study aims to investigate the relationship between psychological contract fulfillment and performance of university physical education teachers in Taiwan, and whether perceived organizational support acts as mediator in this relationship. The research subjects were recruited using stratified cluster sampling. Fifty out of 88 universities in Taiwan were selected according to their locations in northern, central, southern and eastern areas. The survey instruments included psychological contract fulfillment scales, university physical education teachers' performance scales, and perceived organizational support scale. 467 valid questionnaires out of 600 distributed questionnaires were collected (77.8%). The statistical analysis results found that: (1) PE teachers' transaction dimension of psychological contract fulfillment positively affects their teaching performance, research performance and administration and student counseling performance; additionally, PE teachers' relation dimension of psychological contract fulfillment positively affects their teaching performance but does not have significant impact on research performance and administration and student counseling performance, and (2) PE teachers' transaction dimension of psychological contract fulfillment through perceived organizational support exerts an indirectly significant impact on their teaching performance and research performance; hence, perceived organizational support was proven to have mediating effect on this relationship. Finally, in accordance with achieved findings, discussions were made and recommendations were offered to future studies.

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1. Introduction

Without performance, there would be no necessary management. Since the main purpose of management is to improve organizational performance, once an organization does not emphasize on performance, there would be no need for management (Juang, 2008). Available performance measurement results beneficially provide managers with decision-making directions for improvement and for setting strategies. Therefore, wrong or improper performance measurement results would cause considerable damage by possibly causing managers to produce misleading roles, which in turn seriously leads to wrong decisions (Juang, 2008). It is noted that despite the fact that businesses have placed considerable attention to work performance evaluation, it was only until 1990 that performance evaluation began to receive proper attention, especially in the field of sports. Currently, most of performance evaluation indicators have been widely used in various professional sport performance evaluation, for instance, American professional ice hockey player performance evaluation (Leibenstein & Maital, 1992), professional baseball player performance evaluation (Anderson & Sharp, 1997; Sueyoshi, Ohnishi, &

Kinase, 1999), and professional golfer performance evaluation (Fried, Lambrinos, & Tyner, 2004).

In Taiwan, the work content of PE teachers has no difference from general teachers, meaning that they must be also engaged in teaching, research, and counseling service activities (Lu, 2004; Chen & Lin, 2008). Accordingly, their main responsibilities are to drive school sports atmosphere and culture, implement school sport affairs, promote the country's sports and sport policies (e.g. enhance students' physical fitness performance, stimulate the swimming population ratio). Hence, from the above description, it can be observed that university PE teachers are engaged with heavy workload and responsibilities. In current era when everything is assessed based on performance emphasis, PE teachers should pay more attention to this issue and attempt to enhance efficiency and effectiveness through a fair and objective performance assessment system. Taking this point, this study aims to investigate issues related to university PE teachers' performance evaluation.

In the extant literature, performance evaluation has been referred to as individual's regular or irregular manner and work ability and performance, being assessed within a period of time using systematic

assessments, from which the results can provide the organizations with measurement, management directions, and development references for enhancing efficiency and effectiveness and eventually for achieving corporate goals (Noway & Daroca, 1996). Concerning the definition of performance evaluation in sports, Maclean and Chelladurai (1995) proposed the dimensions of coaching performance in order to conduct assessment on sport coaches' job performance and build up a development basis for performance evaluation behavior, in which the assessment content was based on situational requirements under coaching behaviors and players' own ought-to-do behaviors. Further elaborating, Chen and Lin (2008) argued that PE teachers' professional performance evaluation contents and responsibilities were divided into four main work categories of teaching, research, counseling services, and job content with a total of 17 measurement items. From the above studies that performance assessment approaches vary and the evaluation contents are very different, this study aims to build the scale for university PE teachers' professional performance evaluation based on indicator references of Chen and Lin (2008).

Concerning both positive and negative sides of this topic, the positive perspective focuses on understanding the benefits of psychological contract fulfillment while the negative perspective pays attention to the impact caused by psychological contract violation (Grimmer & Oddy, 2007). A review of the extant literature shows that previous psychology-related mainstream research focused on negative behaviors, for instance, mental illness problems and possible treatment while ignoring the importantly successful pursuit for individual and overall prosperity. On attempt to further investigate this topic, the former chairman of the American Psychological Association, Seligman, explored human development potential, virtue, etc. and conducted positive psychological quality investigation as the main research content, consequently emphasized the need to use proper scientific methods to study and discover human positive psychology since this could beneficially enforce individuals, groups, and organizations to work toward higher development and prosperity (Chang, Chen, Lin, & Huang, 2012; Tian, 2009). Therefore, positive psychology is suggested to pay more attention to mental health, meaning that it should focus more on happiness and emotional health rather than on mental illness. Based on this premise, this study aims to from the perspective of psychological contract fulfillment to explore its impact on individuals' behavior.

Psychological contract fulfillment refers to the phenomenon when both parties of individuals and organizations agree to exchange tacit belief and

obligations; hence, it is viewed as a part of each employee and organizational obligations and contributions (Rousseau, 1995). In addition, Li and Gu (2010) pointed out that the psychological contract was a self-fulfilled contract. Since psychological contract is informal, whether the organization or employees violate this psychological contract is entirely based on the subjective perception of the parties and ethics of both sides. Under social traditions and customs as well as ideologies and constraints, both parties are enforced to fulfill the psychological contract in order to safeguard the interests of both sides. Moreover, on studying university teachers' psychological contract, Liu (2006) proposed that university teachers expressed unidirectional perception that their responsibilities included transaction contract (e.g. university teachers should comply with school rules and perform basic duties) and relational contract (e.g. university teachers should make more efforts to create a good interpersonal environment for the mutual development of the school).

Eisenberger, Huntington, Hutchison, and Sowa (1986) pointed out that only social exchange could cause interpersonal sense of obligation, reciprocity, and trust. In the organizational context, once employees feel the support from the organization (e.g. care, appreciation, and recognition), they will feel more inspired and motivated to give the organization more positive feedback and behaviors such as working harder, making more efforts to reach better job performance, and enhancing own organizational commitment. In line with this, Farh, Hackett, and Liang (2007) referred organizational support to the extent of organization's concerns on employees' benefits on response to employees' contribution to the organization, which in turn would stimulate employees to attain higher work efficiency and achieve higher satisfaction with organizational situations. Furthermore, Lee, Hwang, and Chung (2010) referred perceived organizational support to how employees perceive the organization treat them and concern of their well-being for their contributions to the organization. Therefore, organizations should conduct a comprehensive view of different treatment methods to make employees better feel organizational support, which in turn might positively affect both organization's and employees' motivation in exchanging care and consciousness.

Deeper elaborating, Eisenberger, Huntington, Hutchison, and Sowa (1986) divided the impact of perceived organizational support on employee performance into three main dimensions, namely (1) a sense of obligation which helps motivate employees to accomplish organizational goals, (2) motivate employees to the organization with emotional identity and commitment, and (3) increase concerns and carry

out reward system for employees' good performance under higher expectations. On supporting, [Liao, Joshi, and Chuang \(2004\)](#) put forward that the higher employees felt organization support, the more able they would feel that they were the organization's "insiders", which in turn motivated them to be more willing to offer positive efforts, feedback, and behaviors to the organization. However, due to the restriction of employees' capacity and resources, organization's investments might not necessarily directly affect job performance enhancement; instead, these endeavors could beneficially increase employees' cooperative willingness, work motivation, and initiatives. In sum, based on the above studies, perceived organizational support has been observed to be one of the top-concerned topics in organizational research. Taking this point, this study aims to utilize this concept to explore its possible impact on university PE teachers' job performance.

Hypothesis

[Chou, Yen, and Tang \(2005\)](#) pointed out that along with economic and social development, organizations cannot rely solely on the economic rewards to motivate employees but encourage employees to pursue self-esteem, self-actualization, and other psychological levels of satisfaction since these endeavors considerably affect employees' psychological contract fulfillment, which in turn influence their final job performance. In addition, [Ji, Zeng, and Ling \(2008\)](#) suggested that the psychological contract implies the principle of reciprocity, meaning that once employees believe and perceive the organization's goodwill, they would be more motivated to generate more positive feedback, behavior, and higher evaluation toward the organization.

Accordingly, the hypothesis H1 was proposed as follows:

H1: PE teachers' psychological contract fulfillment positively affects their job performance.

[Ji, Zeng, and Ling \(2008\)](#) stated that psychological contract and perceived organizational support were implicit reciprocity and they shared several common bases in their relationships. Specifically, both of these concepts mean that once the employees believe they receive organization's goodwill care and feedback that occur as the organization's voluntary behaviors and not under external pressures (e.g. organization's proactive increase in salary rather than under the enforcement of union or government adjustment), employees will generate higher positive evaluation and organizational behaviors. However, there remains a certain difference. The psychological contract might already exist inside the employee before entering the organization while organizational support is generally

generated after the employee enter the organization, being perceived through their own observations and interactive experience with superiors' endeavors.

Accordingly, the hypothesis H2 was proposed as follows:

H2: PE teachers' psychological contract fulfillment positively affects perceived organizational support.

[Chong, White, and Prybutok \(2001\)](#) found that employees with higher perceived organizational support work with a more positive attitude, and hence work performance is improved significantly. Additionally, [Bell and Mengue \(2002\)](#) through investigating salesperson proved that the salesperson with better perceived organizational support receives higher evaluation toward service quality from customers, and thus their job performance is strongly enhanced. Moreover, [Rhoades and Eisenberger \(2002\)](#) through conducting the meta-analysis from 70 previous relevant studies affirmed that employees' perceived organizational support had a significantly positive impact on job performance. Furthermore, [Deery, Iverson, and Walsh \(2006\)](#) and [Dulac, Coyle-Shapiro, Henderson, and Wayne \(2008\)](#) argued that once employees violate the psychological contract, their loyalty to the organization would be significantly reduced, which in turn resulted in a negative impact on the employment relationships and a significantly positive correlation with employee turnover rate.

Accordingly, the hypothesis H3 was proposed as follows:

H3: PE teachers' perceived organizational support positively affects their job performance.

2. Methods

2.1 Data collection and sampling

The participants of this study were PE teachers from 88 universities in Taiwan, among which 50 universities were chosen according to their locations (Northern, Central, Southern, Eastern, and Island regions). Survey questionnaires were sent to the PE teachers of the selected schools using cluster sampling method. Out of 600 distributed questionnaires, 467 valid questionnaires were returned with the response rate of 77.8%. The demographic analysis results showed that participants were from 132 public universities (28.3%) and 335 private universities (71.7%), including 333 men (71.3%) and 134 women (28.7%). Regarding age, 59 participants (12.6%) were under 35 years old, 298 (63.8%) belonged to the 36-50 year-old group, and 110 (23.6%) were above 51 years old. Concerning teaching experience, 54 participants (11.6%) were under 5 years, 72 (15.4%) were between 6 to 10 years, 213 (45.6%) were between 11 to 20 years, and 128 (27.4%) were above 21 years. It was noted that there were 173 participants (37.0%) with administrative work while a major of 294 participants

(63.0%) did not have administrative work. In terms of work titles, 141 participants (30.2%) were instructors, 136 (29.1%) were assistant professors, 145 (31.0%) were associate professors and 45 (9.6%) were professors.

2.2 Measurement Instruments

Psychological Contract Fulfillment Scale

In this study, the scale for university teachers' psychological contract fulfillment was based on the psychological contract fulfillment scale by Liu (2006), being divided into transaction and relation dimensions depending on what responsibilities to the school that university teachers perceive. The source of this scale topic was based on Rousseau (2000) and Henderson, Wayne, Shore, Bommer, and Tetrick (2008) that proposed psychological contract fulfillment scale with high factor loadings. The questionnaire items were measured using Likert 5-point scale (1=strongly disagree, 5=strongly agree). Confirmatory factor analysis results showed unsatisfactory Chi-square value ($\chi^2 = 103.91$, $p < 0.05$) since the scale was easily affected by large samples. However, other overall model goodness of fit indicators were all significant (SRMR = 0.04, RMSEA = 0.07, CFI = 0.98, and $\chi^2/df = 3.06$), implying construct validity for the scale. In addition, achieved Cronbach's α of 0.89 confirmed high internal consistent reliability for the scale.

Perceived Organizational Support Scale

In the extant literature, the Survey of Perceived Organizational Support (SPOS) (Eisenberger et al., 1986) was proven to be a single factor construct containing a total of 36 questions and the proposed scale had high internal consistency. Since being developed, the scale has been widely utilized in many studies (Eisenberger et al., 1986; Eisenberger, Fasolo, & Davis-LaMastro, 1990; Rhoades & Eisenberger, 2002). In this study, since the excessive number of utilized scale topics would possibly cause respondents to lose patience when filling the survey questionnaire content, this study adopted a simplified version of perceived organizational support scale. Based on the suggestion of Rhoades and Eisenberger (2002) that researchers could employ SPOS scale of Eisenberger et al. (1986) and choose items with higher factor loadings as for measurement, this study followed the approaches of Eisenberger, Stinglhamer, Vandenberghe, Sucharski, and Rhoades (2002) and Shanock and Eisenberger (2006) to select six topics for designing survey questionnaires using Likert 5-point scale (1=strongly disagree, 5= strongly agree). Confirmatory factor analysis results showed unsatisfactory Chi-square value ($\chi^2 = 264.83$, $p < 0.05$) since the scale was easily affected by large samples. However, other overall model goodness of fit indicators were all significant (SRMR = 0.07, RMSEA = 0.08, CFI = 0.93, and $\chi^2/df = 3.72$), implying

construct validity for the scale. In addition, achieved Cronbach's α of 0.83 confirmed high internal consistent reliability for the scale.

Performance of Physical Education Teacher Scale

This study was based on university PE teachers' professional sports content and performance evaluation indicators (Chen & Lin, 2008) to design the scale for PE teachers' performance on work content and responsibilities, being divided into three main dimensions of teaching performance (4 questionnaire items), research performance (4 questionnaire items), and administration and student counseling performance (6 questionnaire items). Confirmatory factor analysis results showed unsatisfactory Chi-square value ($\chi^2 = 264.83$, $p < 0.05$) since the scale was easily affected by large samples. However, other overall model goodness of fit indicators were all significant (SRMR = 0.05, RMSEA = 0.06, CFI = 0.98, and $\chi^2/df = 2.65$), implying construct validity for the scale. In addition, achieved Cronbach's α of 0.92 confirmed high internal consistent reliability for the scale.

Basic demographic variables

Basic participants' demographic variables utilized in this study included six aspects of public or private school, gender, age, teaching experience, administrative work, and position.

2.3 Data Processing

The current study used statistical software packages SPSS 12.0 for Windows and LISREL 8.80 to analyze data obtained from the returned valid questionnaires. The adopted statistical methods included descriptive statistics and structural equation modeling. The significant level of statistic test was based on the benchmark of $\alpha = 0.05$.

3. Results

3.1 SEM model evaluation

The result of the overall model fit analysis showed that the absolute fit indicator ($\chi^2 (393) = 1288.67$, $p = 0.00$) reached the significant level, implying a discrepancy or deviation existed between the covariance matrices of this model and of the empirical data. This result suggested that this model should be rejected since it was easily affected by large samples. However, the achieved SRMR value of 0.08 was less than the minimum acceptance value (0.08) and the RMSEA value of 0.07 was less than the minimum acceptance value (0.08), implying that the model was acceptable. Regarding relative fit measures, the obtained NNFI value of 0.93 was greater than the standardized value (0.90) and the CFI value of 0.94 was greater than the standardized value (0.90); therefore, the model was acceptable. Concerning parsimonious fit measures, the PNFI value of 0.82 was greater than the threshold (0.50) and the PGFI value of 0.71 was greater than the threshold (0.50), suggesting

the model was acceptable. In sum, the model fit test results showed that the present model was acceptable.

3.2 Parameter estimation

In this study, a total of eleven hypotheses were proposed. Based on the overall model of standardized parameter estimation (Fig. 1), the following assumptions were concluded.

- H1-1: PE teachers' transaction dimension of psychological contract fulfillment has a directly positive effect on their teaching performance. The achieved standardized coefficient of 0.60 ($t=6.20$, $p<0.05$) reached the level of significance. Therefore, this hypothesis is supported.
- H1-2: PE teachers' transaction dimension of psychological contract fulfillment has a directly positive effect on their research performance. The standardized coefficient of 0.54 ($t=6.42$, $p<0.05$) reached the level of significance. Therefore, this hypothesis is supported.
- H1-3: PE teachers' transaction dimension of psychological contract fulfillment has a directly positive effect on their administration and student counseling performance. The standardized coefficient of 0.56 ($t=6.25$, $p<0.05$) reached the level of significance. Therefore, this hypothesis is supported.
- H1-4: PE teachers' relation dimension of psychological contract fulfillment has a directly positive effect on their teaching performance. The standardized coefficient of 0.33 ($t=3.81$, $p<0.05$) reached the level of significance. Therefore, this hypothesis is supported.
- H1-5: PE teachers' relation dimension of psychological contract fulfillment does not have a directly positive effect on their research performance. The standardized coefficient of 0.12 ($t=1.36$, $p>0.05$) did not reach the level of significance. Therefore, this hypothesis is not supported.
- H1-6: PE teachers' relation dimension of psychological contract fulfillment does not have a directly positive effect on their administration and student counseling performance. The standardized coefficient of 0.15 ($t=1.95$, $p>0.05$) did not reach the level of significance. Therefore, this hypothesis is not supported.
- H2-1: PE teachers' transaction dimension of psychological contract fulfillment has a directly positive effect on perceived organizational support. The standardized coefficient of 0.39 ($t=4.65$, $p<0.05$) reached

the level of significance. Therefore, this hypothesis is supported.

- H2-2: PE teachers' relation dimension of psychological contract fulfillment does not have a directly positive effect on perceived organizational support. The standardized coefficient of 0.09 ($t=1.14$, $p>0.05$) did not reach the level of significance. Therefore, this hypothesis is not supported.
- H3-1: PE teachers' perceived organizational support has a direct positive effect on their teaching performance. The standardized coefficient of 0.18 ($t=2.81$, $p<0.05$) reached the level of significance. Therefore, this hypothesis is supported.
- H3-2: PE teachers' perceived organizational support has a direct positive effect on their research performance. The standardized coefficient of 0.16 ($t=2.36$, $p<0.05$) reached the level of significance. Therefore, this hypothesis is supported.
- H3-3: PE teachers' perceived organizational support does not have directly positive effect on their administration and student counseling performance. The standardized coefficient of 0.07 ($t=1.10$, $p>0.05$) did not reach the level of significance. Therefore, this hypothesis is not supported.

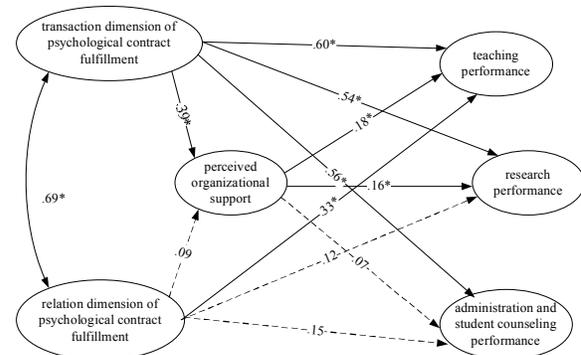


Figure 1. Overall Model of Standardized Parameters

Note: * $p<0.05$

4. Discussions

In Taiwan Universities, workload contents of PE teachers broadly include teaching, research, counseling services, and other activities, which are much larger and heavier than those of PE teachers of universities in Western countries such as the United States and Canada. This can be explained by the fact that in the Chinese culture, apart from teaching, teachers must also play important roles in counseling students' life behaviors. In essence, PE teachers are basically employed in schools under contract-based transaction relationships. Nonetheless, in this study,

the contract described and required PE teachers to perform with school teaching, the extent of research, counseling services, and of specific work performed is perceived as a kind of subjective psychological contract of teachers themselves. This result is in accordance with the idea of [Robinson \(1996\)](#) that psychological contract is built based on the commitment (promise); in addition, on the basis of individuals' subjective perception of mutual obligations, the commitment can be written or verbal. In some cases, commitment is generated from mutual actions between managers and employees; hence, commitment is also perceived as mutual benefit and information transmission between managers and employees. Consequently, the formation of the psychological contract is perceived to be based on these benefits' information and on the basis of mutual understanding.

The study finds that PE teachers' transaction dimension of psychological contract fulfillment positively affects their teaching performance, research performance and administration and student counseling performance. Additionally, PE teachers' relation dimension of psychological contract fulfillment positively affects their teaching performance, which is consistent with previous findings that psychological contract positively influences employees' job performance ([Chou, Yen, & Tang, 2005](#); [Ji, Zeng, & Ling, 2008](#)). Therefore, in order to enhance PE teachers' teaching performance, contract fulfillment should be strengthened. However, the results show that PE teachers' relation dimension of psychological contract fulfillment does not have significant impact on research performance and administration and student counseling performance. Further elaborating, [Thompson and Bunderson \(2003\)](#) point out that transaction contracts mainly focus on economic and material exchange relationships and their contents are clear and unambiguous, being characterized as having highly competitive salary, indicators are common payroll, benefits, bonuses, promotions, etc. Therefore, school's planning of clear incentives will beneficially help enhance teachers' psychological contract fulfillment. For instance, schools can conduct slogans such as "If I seriously focus on teaching, I will cultivate better moral", "If I actively participate in a number of professional development activities, I will perform better at work", etc. since these perceptions belong to transaction dimension of psychological contract fulfillment. In addition, school's planning of the clear-cut's reward approach will also considerably stimulate teachers' psychological contract fulfillment willingness, for instance "If I seriously focus on teaching, I will cultivate students' better moral", "If I actively participate in a number of professional advanced study

activities, I will perform better in job and research work", etc.

Noteworthy, the results show that PE teachers' transaction dimension of psychological contract fulfillment through perceived organizational support exerts an indirectly significant impact on their teaching performance and research performance, which support previous findings of [Ji, Zeng, and Ling \(2008\)](#) and [Sun \(2009\)](#) that perceived organizational support plays an increasingly important role on job performance enhancement. Once PE teachers perceive the support from school ("I am very concerned about school's care, support, and recognition"), their job performance can be positively promoted. On contrast, [Kiewitz, Restubog, Zagenczyk, and Hochwarter \(2009\)](#) argue that when the organization cannot meet employees' expectation, employees will not feel the care, support, and attention from the organization, which in turn will dramatically reduce perceived organizational support. In this context, employees will be easier to commit psychological contract violation; subsequently, they will be unwilling to continue to stay in the organization. Therefore, it is strongly suggested that schools should respect teachers' professionalism, pay more attention to their constructive comments, and provide them with the required teaching equipment and other necessary equipment. Simultaneously, school supervisors and managers should be more interactive to chat with teachers for more sufficient understanding and encourage teachers to set up a research study group since these endeavors can beneficially increase teachers' perception of meaning responses, care, and support from school, supervisors, managers, and colleagues.

Another concern regarding psychological contract is that [Zhang \(2007\)](#) proposes psychological contract to be dynamic and hence there is no uniform standard fixed pattern; additionally, psychological contract will change over time and is always in a constant state of change and revision (e.g. the organization's environmental or management changes will considerably affect employees' psychological contract). On response, [Conway and Coyle-Shapiro \(2011\)](#) through using longitudinal data approach to explore the reciprocal relationship between psychological contract fulfillment and sales performance propose the moderating impact of perceived organizational support. Therefore, it is recommended that future research can conduct data collection through tracking multiple time points in order to better understand the reciprocal relationship between PE teachers' psychological contract fulfillment and performance and to analyze whether perceived organizational support exerts any moderating effect on this relationship.

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