

A Study on the relationship among social support, occupational well-being and play activity support ability of early childhood pre-service teachers in China

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Abstract: A total of 542 early childhood pre-service teachers were collected using China online survey system (www.wjx.cn) to process data of early childhood pre-service teachers. The conclusions are as follows: (1) Social support of early childhood pre-service teachers directly affects professional well-being. (2) The professional well-being of early childhood pre-service teachers directly influences the support ability of play activities. (3) The professional well-being of early childhood pre-service teachers plays an intermediary role in the influence of social support on the support ability of play activities.

Key words: China; early childhood pre-service teacher; social support; professional well-being; play activity support ability

1 Introduction

Early childhood education is an important part of basic education in China, which plays an irreplaceable role in the development of children's whole life. In basic education, pre-service teachers, as the main reserve force, constantly enter the teachers' ranks. Cultivating high-level and high-quality pre-service teachers is the key way to realize the modernization of education and build a strong country in education [1]. Therefore, early childhood pre-service teachers practice is necessary. It is also inevitable to interact with young children in practice.

Pre-service kindergarten teachers have their own unique characteristics. That is to say, in the transition stage from "student" to "teacher", thinking and identity, coupled with their own lack of experience, are more susceptible to external factors [2]. In the process of transitioning from "student" to "teacher", the social support and professional well-being obtained by early childhood pre-service teachers are crucial to teaching development.

Therefore, the purpose of this study is to investigate the relationship among social support, professional well-being and play support ability of early childhood pre-service teachers in China.

2 Literature review and hypotheses

Social support is a major factor affecting professional well-being. Most of the empirical studies on the relationship

between teacher supportive behavior and student learning effect were carried out mainly in high school and junior high school [3].

The ability to support play activities is one of the core professional competencies of early children pre-service teachers. Professional well-being can promote teaching ability and professional development of kindergarten teachers[4][5]. In general, kindergarten teachers with higher professional quality and skills can fulfill and define their roles more accurately, and they can better understand their profession, thus contributing to their professional well-being [6].

Based on the analysis of the preliminary study, the following assumptions are put forward.

- (1) Social support can affect professional well-being.
- (2) Social support affects play activity support ability.
- (3) Professional well-being affects play activity support ability.
- (4) Social support of early children pre-service teachers in China influences play activity support ability through professional well-being.

Based on the above theoretical background, the research model of this study is as follows:

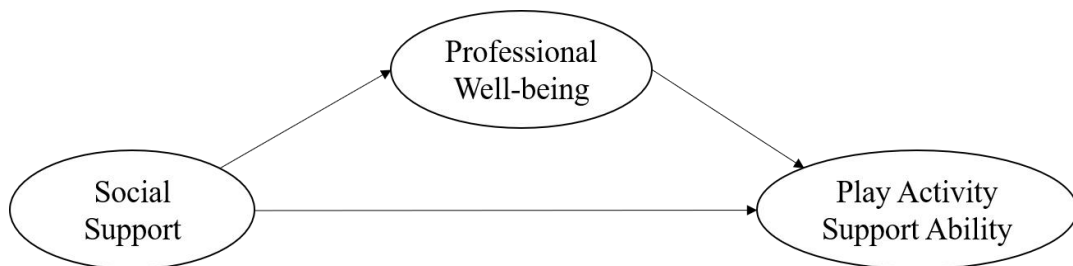


Fig. 1. Path model setting for social support, professional well-being and play activity support ability of early children pre-service in China

3 Research method

3.1 Research object

The China online questionnaire system (www.wjx.cn, Questionnaire Star) collected data from this study. A total of 542 pre-service kindergarten teachers were sampled.

3.2 Research tool

The measurement tools in this study were social support measurement tools, professional well-being measurement tools, and play activity support ability measurement tools. Cronbach' Alpha test was performed on all measuring tools.

3.3 Data processing

SPSSv.26.0 and AMOSv.24.0 were used to process the data.

- (1) Find the correlation and descriptive statistics between variables.
- (2) The hypothesis model is verified and modified by ML (Maximum Likelihood) estimation method.
- (3) The inter-variable effect of the modified model is analyzed.
- (4) The intermediate effect was verified by confidence interval method.

4 A study on the relationship among social support, occupational well-being and play activity support ability

4.1 Validation and modification of hypothesis model

The fitting test results of the hypothesis model are shown in Table 1.

Table 1. The fitting test results of the hypothesis model (N=542)

			Non-standardization (<i>B</i>)	S.E.	C.R.(<i>t</i>)	Standardization (<i>β</i>)
Professional well-being	←	Social support	.828	.029	28.761***	.883
Play activity support ability	←	Professional well-being	.874	.061	14.351***	1.001
Play activity support ability	←	Social support	-.071	.053	-1.361	-.087
*** $p < .001$						

The results of fitting verification show that 3 fitting indexes are not fitted, 1 path is not significant, and 1 path has collinearity problem, so the model needs to be modified.

4.2 Modification of hypothesis models and suitability of modified models

Social support had no significant effect on the play activity support ability. Therefore, consider deleting this path.

Baek Jongnam (2011) argues that setting covariance between error terms can reduce χ^2 and improve fitting index values when using structural equations to analyze validation factors [7]. Therefore, this study attempts to improve the overall fit of the hypothesis model by setting the covariance between the error terms.

Teaching is a kind of emotional work, and teachers' emotions, their own happiness and the output of the curriculum are closely related [8]. For the modification of the hypothesis model, the covariance significantly reduced error terms of χ^2 as set to e05 (emotional well-being) ↔ e06 (curriculum operation) (named "modified model").

Table 2. Results of structural equation verification of modified model (N=542)

			Non-standardization (<i>B</i>)	S.E.	C.R.(<i>t</i>)	Standardization (<i>β</i>)
Professional well-being	←	Social support	.823	.029	28.526**	.877
Play activity support ability	←	Professional well-being	.785	.028	28.132***	.922
*** $p < .001$						

The fitting index and degree of fitting are shown in Table 3.

Table 3. Conformity index as a result of structural equation verification of the modified model (N=542)

Index name	Fitness index	Bonding status	Reference value reference
CMIN (<i>df, p</i>)	146.139(<i>df</i> = 24, $p < .01$)	unfit	$p > .05$
Q(NC)	6.089	unfit	Q(NC) < 3
GFI	.944	fit	GFI > 0.9
TLI	.970	fit	TLI > 0.9
CFI	.980	fit	CFI > 0.9
RMSEA (90% confidence interval)	.097 (.082~.112)	fit	RMSEA < 0.1
SRMR	.0212	fit	SRMR < 0.08

Although the CMIN index does not meet the standard, the relevant research shows that the index is susceptible to the number of samples studied, and is not an important data for fitting verification [9].

Fig. 2. shows the visual presentation of the path analysis results of the modified model.

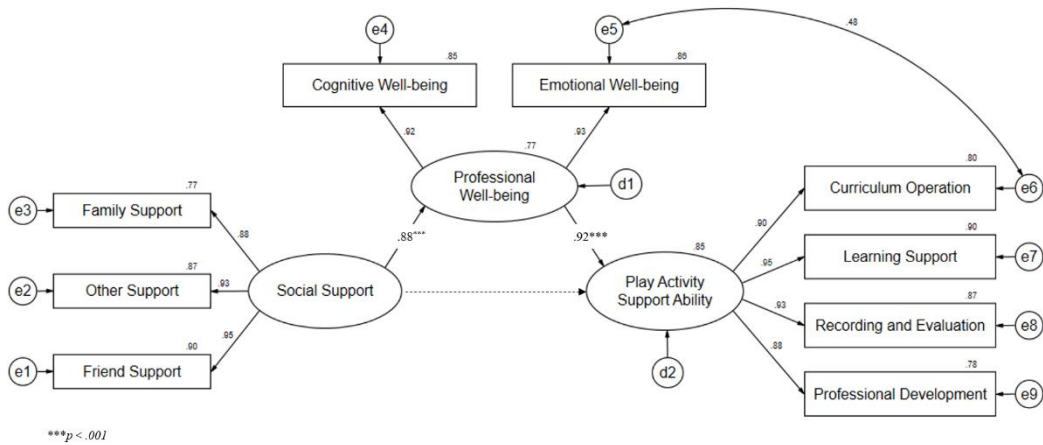


Fig. 2. Results of the structural equation verification of the modified model (standardization coefficient)

4.3 Intervariable effect analysis of modified model

The structural equations of social support, professional well-being and play activity support ability of early children pre-service teachers in China were analyzed. The results are shown in Table 4.

Table 4. Analysis of the influence of social support and professional well-being on play activity support ability of early children pre-service teachers in China (n=542)

Independent variable	Dependent variable	Direct effect	Indirect effect	Total effect
Social support	Professional well-being	0.877	0.000	0.877
Professional well-being	Play activity support ability	0.922	0.000	0.922
Social support	Play activity support ability	0.000	0.808	0.808

4.4 Intermediate effect test

In this study, the confidence interval method was used to test the intermediate effect. AMOS26 was used to establish the model of intermediate effect, and 2000 samples were analyzed by bootstrap function, and the intermediate effect was judged within 95% confidence interval.

The mediating effects of professional well-being are shown in Table 5.

Table 5. The mediating effects of professional well-being (n=542)

Path	Parameters	Estimate	95%	95%	<i>p</i>
			Lower	Upper	
Social support → professional well-being → play activity support ability	Standardized total effects	.808	.535	.748	.001
	Standardized indirect effects	.808	.535	.748	.001

4.5 Hypothesis validation of research model

The hypothesis verification of the research model is carried out as follows through the path model analysis.

Results 1: Social support of early children pre-service teachers directly influenced professional well-being. (Adopted)

Results 2: The professional well-being of early children pre-service teachers directly influenced play activity support ability. (Adopted)

Results 3: The social support of early children pre-service teachers directly influenced the play activity support ability. (Not used)

Results 4: Professional well-being plays a complete intermediary role in the process of social support for early children pre-service teachers in China affecting the play activity support ability.

5 Conclusion

The purpose of this study is to provide basic information for early children pre-service teachers in China by examining the structural relationships of social support, professional well-being and play activities support ability so as to provide directional guidance and navigation for the professional development of kindergarten teachers, and build a high-quality professional teachers team with lofty moral character, exquisite work, reasonable structure and full of vitality.

Conflicts of interest

The author declares no conflicts of interest regarding the publication of this paper.

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