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The Influence of Coaches' Job Stress on Job Burnout Based on Latent Profile Analysis

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Abstract:

Competitive sports coaches, as a special profession with strong professionalism, are one of the professions facing the most stress and bearing the greatest stress. However, excessive job stress is likely to cause a series of negative reactions such as job burnout. In this paper, the relationship between coaches' job stress and job burnout was investigated from the perspective of individuals by surveying 605 coaches using the coaches' job stress questionnaire and job burnout scale, and the data were analyzed by using the latent profile analysis method. The results showed that: (1) coaches' job stress can be divided into "higher stress group", "high stress group", "medium stress group" and "low stress group", with the proportions of 39.67%, 28.43%, 20.50% and 11.41% respectively; (2) The job burnout scores of coaches were significantly different in these four latent categories. The coaches generally had a high job stress. Compared with the low-stress group, the coaches aged 30-39 had higher job stress. Conclusions: There are four latent types of coaches' job stress: higher stress group, high stress group, medium stress group and low stress group. Coaches have high job stress generally. Only age can affect job stress in different demographic characteristics (gender, age, marriage, educational background). Coaches' job stress and job burnout (alienation, inefficiency and emotional exhaustion) are significantly positively correlated. Job burnout (alienation, inefficiency and emotional exhaustion) of different types of job stress are significantly different. Significance: The research results provide a new perspective for exploring the relationship between coaches' job stress and job burnout.

Keywords*: Coaches, Job stress; Job burnout, Latent profile analysis.*

I. INTRODUCTION

Competitive sports coaches, as a special profession with strong professionalism, are one of the professions facing the most stress and bearing the greatest stress, [1] because they not only have to undertake the management and training of the entire sports training, but also play many professional roles (for example, sports training designers, parents, teachers, friends, researchers, etc. that will cause role conflicts, role ambiguity, etc.) due to their special professional characteristics (for example, heavy work, high social expectations, heavy responsibilities, and facing various types of athletes). Excessive job stress is likely to cause a series of negative reactions such as job burnout, which will also seriously affect their physical and mental health and quality of life, but also directly affect the athletes' competitive level, and

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even affect the development of competitive sports in various countries [2]. Therefore, it is of great practical significance to study the job stress of coaches.

Based on a review of relevant literature, it is found that domestic and foreign scholars have defined job stress from the following perspectives: firstly, they believe that stress is caused by external effects and comes from external stress sources; Secondly, stress comes from individual's subjective cognition and feelings, that is, the source of stress comes from internal cognition; Third, stress comes from the interaction of external and individual internal cognition, i.e. stress is caused by the interaction of external environment and internal subjective cognition, which has also been generally recognized in academic circles [3, 4].

Therefore, in this study, combined with the third point of view, the job stress of competitive sports coaches refers to a series of physiological, psychological and behavioral reactions caused by the interaction between individuals and the work environment due to the stressors of the work environment, such as long working hours, heavy workload, etc.

A large number of studies at home and abroad have shown that job stress is an important cause of job burnout, because when individuals are stimulated by the stress in the work environment, they will have a series of maladjustment in body and mind, and when this maladjustment acts on individuals for a long time, it will produce symptoms such as emotional exhaustion, low personification and low sense of achievement.

According to the previous views of domestic and foreign scholars on job burnout, [5, 6] in this paper, the job burnout of coaches refers to a series of extreme negative psychological states (including low emotion and efficiency) caused by uncomfortable situations or stress in the working environment of coaching, with typical characteristics of depression, physical and mental exhaustion, reduced work efficiency and disorientation.

There is not much research on the relationship between coaches' job stress and job burnout at home and abroad, and some scholars in North America and Europe have done some research from qualitative and quantitative aspects [7, 8].

Among the domestic articles on coaches' job stress and job burnout, most of them only do descriptive research on the demographic characteristics of job burnout and job stress, [9, 10] and some have done some research on the correlation between job stress and job burnout of coaches [11-13].

According to previous literature analysis, there is a contradiction between the specific dimensions of coaches' job stress and job burnout. In the past, the conclusions about the relationship between coaches' job stress and job burnout were mainly centered on variables, while ignoring the heterogeneity of coaches' groups, that is, coaches with the same scores had different answer modes on each topic. Some studies have found that the classification effect of the latent profile analysis is better than that of the systematic

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clustering method when classifying heterogeneous populations, and it is considered as an effective supplement to the clustering analysis, because it can avoid the defects of subjective classification criteria and large heterogeneity within categories [14].

Latent Profile Analysis (LPA) is a statistical analysis method of Person-Centered Approach, which assumes that there is a classification method that can classify people and then analyze the unique characteristics of different groups, allowing researchers to understand the mixture of variables and the results produced by specific groups, so as to determine different types of subgroups based on the difference of the nature and degree of explicit variables and capture the group inequality that cannot be observed by variable-centered research. At the same time, the individual-centered orientation can help clarify the inconsistent conclusions of previous studies, and determine the specific conditions for the establishment of a certain theory according to latent categories, especially the discussion on the relationship between categories, antecedents and outcome variables [15].

Therefore, in this study, the latent profile analysis method is used to classify the types of coaches' job stress from the perspective of individual differences, and the best classification model is explored based on the data. On this basis, the relationship between the types of coaches' job stress and job burnout is explored.

II. MATERIALS AND METHODS

2.1 Research Objects

In the research, the convenience sampling method was adopted to conduct a questionnaire survey on coaches in the training centers of the sports bureaus of 20 provinces across the country using the questionnaire research platform, covering more than 20 events such as swimming, track and field, gymnastics, diving, badminton, basketball, volleyball, martial arts, taekwondo, wrestling, fencing, shooting, tennis, canoeing, etc. The number of valid samples collected in this study was 605, of which 71% were men and 29% were women; 46% were 30-39 years old, 9% were 50-59 years old, 9% were 20-29 years old, 26% were 40-49 years old; 20% had been working for less than 5 years, 36% for 5-14 years, and 44% a for more than 15 years; 14% were college graduates, 70% were undergraduates and 16% were postgraduates; 36% had a junior job title , 39% intermediate and 5% senior; 78% were married and 22% were unmarried.

2.2 Measuring Tool

2.2.1 Coach job stress questionnaire

Coach's job stress questionnaire is compiled strictly according to the steps of questionnaire compilation. Specifically, first of all, the author collected the measurement tools of job stress in related fields according to the literature, modified the items according to the actual situation of coaches, conducted

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in-depth interviews with sports coaches with different demographic variables, recorded the interview contents, and conducted group discussion among coaches to collect the stressful events of coaches at work extensively; secondly, the coach interviews were sorted and classified, the contents of the panel discussion were summarized and sorted out, the items were initially classified, the items were classified and named, and the operational definition was made to form an initial questionnaire of job stress; thirdly, the initial questionnaire was sent to the psychological experts for expert validity test, and the questionnaire was revised and suggestions were put forward; next, the initial questionnaire was distributed in small samples, the items were analyzed by SPSS statistical software, the items with no resolution were deleted, and the reliability and validity were tested by exploratory factor analysis and internal consistency reliability analysis, so as to form a formal questionnaire for large-scale distribution. Finally, a coach job stress questionnaire was formed, which had five dimensions: work characteristic stress, interpersonal relationship stress, performance appraisal stress, work guarantee stress and career development stress. Among them, job stress had six items, interpersonal relationship stress six items, performance appraisal stress six items, work guarantee stress four items and career development five items. The composition reliability (CR) and internal consistency (Cronbach) coefficients were used to test the reliability. The Cronbach α coefficients of 5 dimensions of coaches' job stress were greater than 0.8 in 0.884, 0.896, 0.887, 0.846 and 0.829 respectively. The composition reliability of the questionnaire was 0.885, 0.896, 0.889, 0.850 and 0.831 higher than 0.7 respectively. Therefore, the questionnaire had a high reliability. At the same time, the overall model fitting index chi-square/degree of freedom was 1.108, less than 3; GFI and AGFI were 0.96 and 0.952, respectively, which were greater than 0.8; RMSEA was 0.013 less than 0.08, and RMR was 0.098 less than 0.5; TLI, IFI and NFI were 0.995, 0.996 and 0.996, respectively, which were all greater than 0.9, indicating that the questionnaire had a good structural validity.

2.2.2 Coach job burnout questionnaire

At present, the most widely used measuring tool for job burnout is Maslach Burnout Questionnaire compiled by Maslach and Jackson (1981), which has been unanimously recognized by scholars from all over the world and translated into many languages and widely used internationally. In this study, coaches' job burnout was still measured by the mature general job burnout questionnaire used in related fields. However, in order to adapt the questionnaire to the actual situation of coaches' work, the sentences of individual items were adjusted to make the questionnaire more in line with coaches' language habits. The questionnaire used in this paper is the Chinese version of Job Burnout Questionnaire revised by Chinese scholar Li Chaoping (2003) according to Maslach's questionnaire, which is the most cited Chinese version questionnaire at present [16]. After empirical research, it has good reliability, including three dimensions of emotional exhaustion, low efficacy and alienation, with 15 questions in total. In this study, the overall fitting index chi-square/degree of freedom of job burnout was 1.772, less than 3; GFI and AGFI were 0.97 and 0.959, respectively, which were greater than 0.8; RMSEA was 0.036 less than 0.08, and RMR was 0.085 less than 0.5; TLI, IFI and NFI were 0.982, 0.985 and 0.967, respectively, which were greater than 0.9; the Cronbachαcoefficients of three dimensions of coaches' job burnout were greater than 0.8 in 0.866, 0.854 and 0.885 respectively; the component reliability was 0.87, 0.855 and 0.889 respectively, all of which were greater than 0.7, indicating that the questionnaire had a high reliability.

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2.3 Data Analysis Method

Mplus7.4 was used to analyze the latent profiles of coaches' job stress and explore the latent categories of Chinese coaches' job stress based on the five dimensions of coaches' job stress. SPSS20.0 software was used for multi-category logistics regression analysis, analysis of variance and descriptive statistics of the results of the latent sections.

III. CONCLUSION

3.1 Research Results and Analysis

3.1.1 Common method bias test

As the data and information collected in this study were all from self-reported questionnaires and collected in a period of time, it was a cross-sectional research design. In addition, common method variation generated by measurement tools may affect systematic errors and lead to errors in the correlation between dimensions, and method variation may lead to overestimation or underestimation of the correlation between dimensions, resulting in Type I or Type II errors. In this study, Hammen's univariate analysis was used to detect CMV. Specifically, all the questions in the two questionnaires (27 on coach job stress and 15 on job burnout) were selected into the factor analysis of SPSS, and the principal component analysis was adopted with the maximum variation axis to determine the number of factors to determine whether CMV was serious. As long as most of the explanatory power (not suggested to exceed 50%) is not captured by one factor or one in a few factors, it can be stated that at least no severe common method variation exists [17]. Factor analysis yielded eight factors with a total explanatory power of 65.484% (a single factor did not occur). The variance of the eight factors also ranged from the maximum 9.893% to the minimum 5.804%, (among which first principal component explained 9.893%, which did not exceed 50%), and no one factor explained most of the variance. Therefore, it can be considered that there is no serious common method variation in this study.

3.1.2 Descriptive statistical analysis

TABLE I. Mean, standard deviation and correlation coefficient of research variables

Variables	Mean	SD	PAS	IRS	JCS	VDS	JSS	EE	IE	AL	JOB B	JOB P
PAS	4.70	1.58	1									
IRS	3.94	1.52	.184**	1								
JCS	4.54	1.49	.203**	.193**	1							
VDS	4.92	1.38	.227**	.308**	.262**	1						

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JSS	5.37	1.41	.305**	.122**	.218**	.191**	1					
EE	4.22	1.54	.290**	.392**	.301**	.436**	.256**	1				
IE	5.84	1.17	.389**	.323**	.315**	.427**	.334**	.495**	1			
AL	3.69	1.72	.390**	.431**	.334**	.355**	.370**	.501**	.593**	1		
JOB B	4.58	1.23	.428**	.469**	.383**	.484**	.387**	.811**	.803**	.866**	1	
JOB P	4.69	0.91	.641**	.594**	.613**	.633**	.588**	.544**	.582**	.614**	.700**	1

* * indicates a significant correlation at .01 level (two-sided). PAS performance appraisal stress IRS interpersonal relationship stress JCS job characteristics stress VDS vocational development stress JSS job security stress EE emotional exhaustion IE ineffective AL alienation JOB P job stress JOB B job burnout

Coaches' job stress and its dimensions, job burnout and the average and standard deviation of its dimensions are shown in Table 1. Pearson correlation shows that all dimensions of coaches' job stress are positively correlated with all dimensions of job burnout.

3.1.3 Latent subcategories of coaches' job stress

The scores of performance appraisal pressure, interpersonal relationship pressure, work characteristic pressure, career development pressure and work guarantee pressure were used as indicators for latent profile analysis in *Mplus*7.*4*. In the latent profile analysis, the number of categories was gradually increased from one model to another, and the *Full-Information Maximum Likelihood* (*FIML*) was used to estimate the models and compare the results of each model until the optimal model was found. When estimating the fitness of the model, the test indicators of model adaptation mainly include: Chikaike Information Criterion (AIC), Bayesian Information Criterion (BIC) and Information Entropy (Entropy) index, and other information statistics indicators such as Lo-Mendell-Rubin likelihood ratio (LMRT) to evaluate the goodness of fit of the model. Generally speaking, if a model has a higher Entropy, a lower AIC and BIC, and a significant LMRT, the degree of fitting of this model is high [18]. The fitting results of latent profile analysis model of data are shown in Table 2. Among the five models, the AIC and BIC values decreased continuously with the increase of the number of latent states. The decrease tended to be slow when the number of latent status was 4, and the LMRT of the models reached significant, indicating that the four types of models were superior to the three types of models. The Entropy value was also greater than 0.80, indicating that the accuracy of classification was more than 90%. In summary, the four-category model had the best fit with the data, and the four-category model was determined to be the optimal model.

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TABLE II. 5 Fitting indicators of quantitative latent profile analysis models of five categories

Number of categories	AIC	BIC	aBIC	Entropy	LMRLR	BLRT
(n=605)						
C=1	10943.666	10987.718	10955.971	/	/	/
C=2	10702.664	10773.148	10722.352	0.812	246.586***	<0.001
C=3	10563.629	10660.544	10590.699	0.788	147.205***	<0.001
C=4	**10473.372**	**10596.718**	**10507.825**	**0.819**	**99.664***	**<0.001**
C=5	10446.460	10596.238	10488.297	0.824	37.924	<0.001

3.1.4 Name of categories

Four latent profile model results were analyzed to describe and name the three categories. They were named according to the average condition value in five dimensions: performance appraisal pressure, interpersonal relationship pressure, work characteristic pressure, career development pressure and work security pressure. The average condition value of each dimension is shown in Fig. 1.

According to the conditional means of each dimension shown in Fig. 1, they were named as: C1, C2, C3 and C4, where Group C1 had the lowest scores in each dimension, and was named as low stress group, accounting for 11.41% of the total; Group C2 had higher scores in three dimensions of performance appraisal pressure, work characteristic pressure, and especially work security pressure, and lower scores in two dimensions of interpersonal relationship pressure and career development pressure, and was named as medium stress group, accounting for 20.50% of the total; Group C3 scored between the highest score and the lowest score in each dimension, which was in a transitional state, and was named as the high pressure group, accounting for 28.43% of the total; and Group C4 scored the highest in each dimension, was named as the higher pressure group, accounting for 39.67% of the total.

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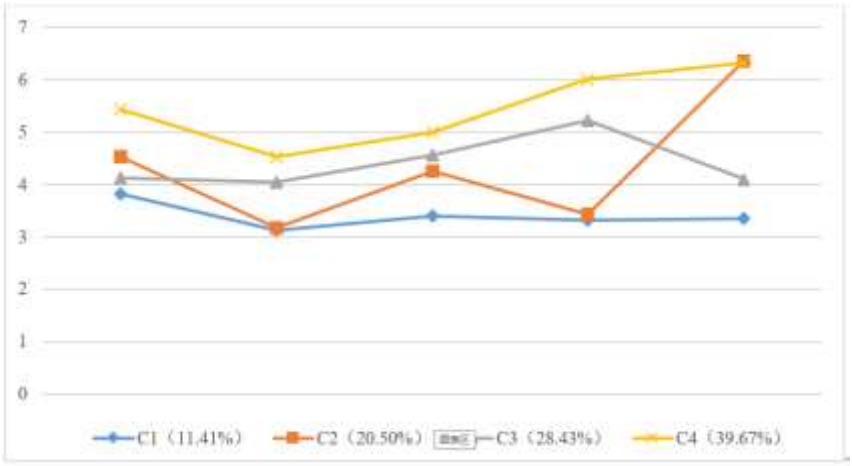

C1: Performance appraisal pressure, C2: interpersonal relationship pressure, C3: work characteristic pressure, C4: career development pressure, C5: work security pressure
Fig 1: Estimated conditional mean of four latent categories of coaches' job stress

3.1.5 Multiple Logistic regression results of demographic variables on 4 latent categories of coaches' job stress

TABLE III. Logistic regression of four latent categories of demographic variables on coaches' job stress

	C2 medium stress		C3 High stress		C4 Higher stress	
	OR	CI(95%)	OR	CI(95%)	OR	CI(95%)
[Gender=1.00]	0.726	0.378-1.394	1.079	0.578-2.015	1.289	0.695-2.392
[Gender=2.00]						
[Educational background =1.00]	0.375	0.129-1.086	0.666	0.25-1.772	0.82	0.321-2.097
[Educational background=2.00]	0.994	0.450-2.194	1.369	0.638-2.935	1.389	0.655-2.943
[Educational background=3.00]						

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[Marital status =1.00]	1.379	0.688-2.765	1.282	0.677-2.425	1.485	0.788-2.796
[Marital status=2.00]						
[Age =1.00]	2.314	0.807-6.634	1.308	0.500-3.426	2.552	0.932-6.991
[Age =2.00]	**4.976****	1.792-13.817	**2.809***	1.106-7.134	**9.682*****	3.654-25.655
[Age =3.00]	0.942	0.347-2.557	1.236	0.526-2.906	1.748	0.694-4.404
[Age =4.00]						

a. The reference category is C1. Note: * stands for $p < 0.05$, * * stands for $p < 0.01$ and * * * stands for $p<0.001$, the same below.

The results of latent profile analysis of coaches' job stress were taken as the dependent variable, and gender (women as the reference), marital status (unmarried as the reference) and educational background (graduate students as the reference) were taken as the independent variables for multi-item Logistic regression analysis (see Table 3). C1 category was taken as the reference group, and C2, C3 and C4 categories were compared with it. The result of odds ratio (OR) showed that the categories of coaches' job stress were affected by age, but not significantly by gender, marriage and educational background.

C2, C3 and C4 coaches in the 30-39 (age 2) age group had more job stress compared to coaches over 50 (age 4). In C2, C3 and C4 categories, there was no significant difference in the job stress of coaches in the age group of 20-29 (age 1) and 40-49 (age 3) compared with those over 50 years old. Compared with female coaches (gender 2), there was no significant difference in job stress of male and female coaches in C2, C3 and C4 categories. There was no significant difference in job stress between C2, C3 and C4 coaches with junior college degree (degree 1) and bachelor degree (degree 2) when compared with coaches with high degree (degree 3). There was no significant difference in job stress of C2, C3, and C4 type married and unmarried coaches compared with unmarried (Marital 2) coaches.

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3.1.6 Comparison of job burnout among coaches with different types of job stress

TABLE IV. Comparison of job burnout and its dimensions among coaches with different types of job stress

Variables	M ± SD(C1)	M ± SD(C2)	M ± SD(C3)	M ± SD(c4)	F	Post comparison
Emotional exhaustion	3.386±1.261	3.490±1.247	3.864±1.566	5.096±1.281	57.727***	4>1,4>2,4>3
Inefficiency	4.959±1.180	5.402±1.197	5.484±1.137	6.565±0.684	74.809***	4>3>1,4>2>1
Alienation	2.514±1.220	3.192±1.719	3.042±1.466	4.743±1.431	70.371***	4>3,4>2>1
Job burnout	3.620±0.879	4.028±1.030	4.130±1.049	5.468±0.902	111.963***	4>3>1,4>2

The one-way ANOVA was used to analyze the relationship between the latent types of job stress and job burnout of coaches. The results showed (Table 4) that there were significant differences in the job burnout scores of the latent job stress categories of coaches [$F(3, 601)=111.963$, $\eta^2=0.359$, $p<0.001$]. Back testing revealed that the job burnout scores of Category C4 were significantly higher than those of Category C1, C2 and C3 ($p<0.05$), while that of C3 was significantly higher than that of C1 ($p<0.05$). There was no significant difference in the job burnout scores between Category C1 and C2.

From all dimensions of job burnout, the latent job stress categories of coaches had significant differences in the scores of emotional exhaustion [$F(3, 601)=57.727$, $\eta^2=0.224$, $p<0.001$], alienation [$F(3, 601)=70.371$, $\eta^2=0.260$, $p<0.001$] and professional inefficacy [$F(3, 601)=74.809$, $\eta^2=0.272$, $p<0.001$]. Back testing revealed that the emotional exhaustion score of Category C4 was significantly higher than that of Category C1, C2, and C3 ($p< 0.05$), while there was no significant difference in the emotional exhaustion score between C2, C3, and C1. In the dimension of inefficacy, the scores of C4 were significantly higher than those of C1, C2 and C3 ($p < 0.05$), while those of C3 and C2 were significantly higher than those of C1 ($p < 0.05$). There was no significant difference between C3 and C2. The alienation scores of C4 were significantly higher than those of C1, C2, and C3 ($p < 0.05$), while that of C2 was significantly higher than that of C1 ($p < 0.05$), with no significant difference between C2 and C3, or between C1 and C3.

3.2 Discussion

3.2.1Types of coaches' job stress

Previous studies on coaches' job stress are based on discussing the relationship between the variables and job burnout, taking coaches as a homogeneous whole, without noticing the high heterogeneity within coaches themselves. Therefore, in this study, the types of coaches' job stress were studied by using the latent profile analysis (LPA) from the perspective of individuals. The results of the study showed that there existed obvious classification characteristics of the types of coaches' job stress. According to the coaches'

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reaction patterns to the topics, the coaches' job stress could be divided into four types, which were respectively "C1 low stress group", "C2 medium stress group", "C3 high stress group" and "C4 higher stress group". Significant differences existed in the scores and trends of coaches' job stress in different categories, which indicated the heterogeneity of the coach group. The scores of coaches in the low-pressure group in all dimensions are relatively low compared with other types, accounting for 11.41% of the total number of coaches, and their performance appraisal pressure is relatively high compared with the other four dimensions, which reflects the characteristics of this job appraisal and is also a common stress phenomenon. When interviewing some coaches, the appraisal of coaches is based on performance, and whether their players get good rankings and medals in the competition is different. Among the five dimensions of job stress, C2 coaches have the highest job security pressure, accounting for 20.50% of the total number of coaches, and they generally feel that their work income is low, their welfare benefits are significantly different from those of other industries, and their contribution is not directly proportional to their income. Compared with C1 and C2, C3 coaches are in a higher job stress group, accounting for 28.43% of the total coaches. They are particularly stressed in career development, and they usually have to face the pressure of limited project development, insufficient reserve talents, continuous learning and so on. Compared with the other three types, C4 coaches' job stress is in a high state in five dimensions, accounting for 39.67% of the total number of coaches, the largest proportion, which fully shows that they are a high-risk professional group like other helpers, and the high job stress is a common phenomenon among coaches, so their mental health problems must be highly valued.

3.2.2 Demographic characteristics of coaches with different categories of job stress

The results of the study showed that the C2, C3 and C4 coaches had no significant differences in gender, educational background and marriage compared with the C1 coaches. From the nature of the work of coaches, the job stress felt by coaches in the field of interpersonal service is in the upper-middle level, which may be due to the lower salary and welfare protection of coaches' industry compared with other professions, is consistent with the previous investigation and the feedback from most coaches. Coaches are not only responsible for the training of athletes but also manage their daily lives. They spend most of their time on athletes and take little care of their families. Therefore, coaches hope to compensate families materially. However, when there is a big gap between material returns and expectations, there will be a huge psychological gap and stress. The results of the study were consistent with those of previous studies, which indicated that job stress is related to gender, educational background and marital status [19]. The superiority of social system and the change of social customs make the status of men and women more and more equal. More and more female coaches seek independence. They are facing more challenges and stress when they love their career and pursue success continuously.

However, in terms of age, coaches in C2, C3 and C4 categories who are in the stage of 30-39 years old have greater job stress than coaches over 50 years old. The reasons may be: On the one hand, coaches between 30 and 39 years old are in the career development period, and they have more tasks and responsibilities in the unit, hoping to get more learning opportunities and promotion space. On the other hand, most of the coaches in this age group have families and established businesses, a period when they

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need to raise children and support the elderly. As a result, they will have higher requirements for the unit's expected welfare and income, and when their requirements and expectations are not effectively met, they will generate tremendous stress relative to coaches over 50 years old.

3.2.3 Influence of different types of coaches' job stress on job burnout

In this study, the relationship between coaches' job stress, job burnout and their specific dimensions is not only investigated from the variable level, but also analyzed from the perspective of individual differences. The results showed that the job burnout of competitive sports coaches had significant differences in different types of coaches' job stress. The job burnout score of C4 was the highest and significantly higher than that of the other three categories. The job burnout level of C3 was greater than that of C1, and the job burnout levels of C1 and C2 were the lowest and had no significant difference.

On the whole, the coaches in C4 category were at a high level in all aspects of job stress, and at the same time, they were at the highest level in the dimension or each sub-dimension of job burnout, which was basically consistent with the conclusion of most domestic scholars [11, 12].

Malach, a scholar, believed that job burnout from the perspective of emotional loss is caused by coaches' efforts to meet the needs of athletes and sports teams under long-term pressure, which leads to excessive efforts of resources. Shirom, a scholar, believed that job burnout is a process in which one's internal energy resources are constantly consumed. In other words, when coaches work according to the job requirements, they will gradually lose their inner energy due to their constant efforts, and finally fall into a state of job burnout [20].

No matter from the overall or from the specific dimensions, the C4 coaches are at the highest level in terms of emotional exhaustion, inefficiency or alienation, which suggests that we should first pay attention to the job stress of them. Second, attention should be paid to the fact that C3 and C2 coaches were also more likely to produce inefficacy, which was basically consistent with the conclusion of the related study [21] and the result of the previous qualitative interview. When the project is faced with the shortage of talents, lack of funds or even the cancellation of the project, and the leaders do not pay attention to the development of the project, the coaches will inevitably feel disappointed with the work and reduce the work efficiency. Finally, in terms of alienation, special attention should be paid to C2 coaches, because they may have many roles to take on in their work and life and also have many relationships to deal with. They need to coordinate with the public, maintain good relationships with leaders and superiors, and also handle relationships with athletes. A long-term continuation will lead to emotional exhaustion of the coaches, physical and mental fatigue, which in turn leads to disorientation at work, less guidance to athletes, and less enthusiasm for work, indifference towards athletes.

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3.3 Conclusion

In this study, the categories of coaches' job stress were explored by latent profile analysis from an individual perspective, and the relationship between demographic characteristics of each category of job stress and job burnout was analyzed, and the following conclusions are drawn:

(1) There are four latent types of coach job stress: higher stress group, high stress group, medium stress group and low stress group.

(2) Coaches have generally high job stress. Among different demographic characteristics (gender, age, marriage, education background), only age affects job stress, and coaches aged 30-39 have high job stress.

(3) Job stress and job burnout (alienation, inefficiency and emotional exhaustion) of coaches are significantly positively correlated. Job burnout (alienation, inefficiency and emotional exhaustion) of different types of job stress of coaches are significantly different.

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