

Empirical Research on the Influence of Sense of Control on Psychological Capital

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Abstract

Psychological capital is an individual's positive psychological state of development, which has four features and five criteria. Psychological capital structure in Chinese cultural context contains: calm, hope, optimism and confidence. On the basis of researching literature, the redemptory valid questionnaires were analyzed by applying Structural Equation Model (SEM). The study found that sense of control has a positive impact on the 4 dimensions of psychological capital (calm, hope, optimism and self-confidence).

Keywords

Psychological Capital; Sense of Control; Structural Equation Model (SEM)

1. Introduction

Psychological capital (also known as the positive psychological capital) is relatively a new concept in the field of organizational behavior, which was put forward for the first time in 2004 by Fred Luthans, a professor of organizational behavior in the University of Nebraska-Lincoln and former president of Academy of Management Magazine. And it refers to the individual state of a positive psychological development. Psychological capital is different from the economic capital, social capital and human capital [1]. Economic capital answers the question of “what do you have”, including the capital, assets, equipment, patents, data, etc. Social capital answers the question of “who do you know”, including relationships, friends, contact network, etc. [2]. Human capital answers the question of “what do you know”, including experience, education, skills, knowledge, idea, etc. The psychological capital answers the question of “who are you”, including faith, hope, optimism, toughness, etc.

Fred Luthans, Carolyn M. Youssef and some other people [3] also pointed out that the standards of determining whether a resource can form competitive advantage include: long term, namely whether the resource can form a lasting competitive advantage and has a long life, rather than a flash in the pan; uniqueness, namely something that only you have, other organizations do not; cumulation, namely the resources can continuously increase the competitive advantage for the organization; inter-connectivity, namely each component works together to form the overall competitive advantage; renewal, namely the resources can be constantly updated and added [4]. Economic capital can form competitive advantage only in the aspect of cumulation, but it could not form a clear advantage in other ways. The human capital has an advantage in the aspect of cumulation and the advantage is uncertain in other aspects. Social capital has advantages in the aspects of uniqueness, cumulation and inter-connectivity, but its advantages in such aspects as long term and renewal are not obvious. Only the psychological capital in the above five aspects all can form a significant competitive advantage.

Psychological capital research originates from the positive psychology movement [5].

The positive psychology movement advocated by the former Chairman of American Psychological Association—Seligman. Martin E. P. in 2000 proposed that psychology and behavior science should pay more attention to guide and promote the positive aspects of human life, and not just to treat mental illness. What positive psychology concerns include: benefits, satisfaction, hope and happiness, courage, interpersonal skills, aesthetic, persistence, forgiveness, creativity, consciousness of the future, potential and wisdom, civic virtue, responsibility, altruism, tolerance, professional ethics, manners, etc. [6]. American psychologist, respectively published two special issues devoted to positive psychology problems in January 2000 and March 2001 [7]. In the 2001 winter volumes of *Journal of Humanistic Psychology*, there are 6 articles talking about positive psychology. In addition, Coutu D. L., Hamel, G., Klonhler E. A. and other scholars respectively studied the related problems in positive psychology [8]. Positive psychology has become a new development direction in psychological science and behavioral science research in the new century.

The idea of positive psychology has triggered the research of positive organizational behavior. Inspired by the idea of positive psychology, Fred Luthans came up with the concept of positive organizational behavior (POB) for the first time in 2002, and defined it as “the research and application of the human resources superiority and psychological ability [9], which are measurable, evolvable and have a significant effect on the performance.” He also put forward the CHOSE model related to the core contents, namely the core content of positive organizational behavior includes confidence, hope, optimism, subjective well-being and emotional intelligence. In the same year, Fred further put forward five standards defining the POB extension. The positive organization research center at the University of Michigan, which studies specifically for positive organizational scholarship (POS), pointed out in their books that the POS core concepts include: process, ability, structure, motivation, output or result, etc. [10]. The guiding ideology of POS and POB is consistent, both study the organizational behavior and performance problems from the positive sides. In addition, Wright T. A., Erez A. and other scholars also studied the positive organizational behavior.

2. Literature Research

Predecessors’ research achievements about the psychological capital [11] [12] include psychological capital concept, the relationship between psychological capital and performance, etc.

Fred Luthans, James B Avery and other scholars (2006) defined psychological capital as: individual positive psychological state of development, it has four features and five criteria [13]. The four characteristics: 1) have confidence in the challenging work and try to complete it; 2) treat the present and the future optimistically; 3) face the future, set goals and take steps to achieve goals; 4) be able to recover from adversity or frustration and continue until succeed. The five judgment standards include: 1) they are based on theory and research; 2) can effectively measure; 3) is relatively new and unique in the field of organizational behavior; 4) is a kind of changeable state of mind (not fixed psychological traits); 5) has a positive influence on work performance [14]. On the basis of generalization and summarization of research achievements of positive organizational behavior, Fred Luthans (2004) [15], Carolyn M. Youssef (2008) put forward that psychological capital structure included four aspects, namely: 1) Confidence or self-efficacy. Albert Bandura defined self-efficacy as that an individual mobilize the motivation and cognitive resources in a particular context, take the necessary actions to complete a specific task.

High confidence people choose challenging work and make efforts to finish it. 2) Hope. Positive psychologist

C. Rick Snyder pointed out that hope is a state of motivation formed by the interaction of goals, agency and pathways. Individuals with high sense of hope think they are capable and are willing to choose the appropriate way to achieve their goals. 3) Optimism. Individual adopts the positive method to explain the intrinsic, ancient, common events, and explain outward, temporary and situational event in a negative way [16]. Optimists treat what happens in life positively, they seldom have such negative moods as depression, guilt and remorse. 4) Resiliency. Individual's ability of getting out of adversity, failure, uncertainty and recovering from them. Restoring force includes three aspects: accept the reality that, consider life as positive, adapt to environmental changes [17].

The study led by Gallup leadership institute of university of Nebraska-Lincoln in America in 2006 found that psychological capital has significant positive correlation with employees' performance and job satisfaction; employee's work performance can be improved by the psychological capital training [18]. Luthans, Avery and Avolio (2006) have found that the rate of return on investment of psychological capital can be as high as 270% through intervention studies. With the help of psychological capital scale (include three indicators: hope, optimism and resilience), which is developed by Fred Luthans, Fred Luthans, Bruce J. Avolio, Fred O. Walumbwa, Weixing Li (2005) took Chinese employees as samples to study the relationship between psychological capital and performance and found that the psychological capital and work performance [19] [20] (include the executive director's evaluation and pay for performance) were significantly positive correlated. Luthans Kyle W., Jensen, Susan M. (2005) studied the relationship between nurses' psychological capital and work performance, the results showed that the psychological capital has significant positive correlation with the intention to stay [21], the targets of the unit and work commitment. Susan M. Jensen, Fred Luthans and others (2006) found through research that the leaders' psychological capital were positively correlated with employees' cognition of leaders' integrity. Zhong Lifeng (2007) found that the three dimensions of psychological capital (hope, optimism, resilience) have a positive influence on job performance, organizational commitment and organizational citizenship behavior [22]. The author (2009) found through research that, under the background of Chinese culture, psychological capital structure include: calm, hope, optimism, confidence.

The concept of control point was first proposed by Rotter in 1954, it refers to the degree of an individual believes himself can control and influence events. Individuals with high internal control points believe that their behavior and actions decided the many events in their lives [23], and individuals with high external control points believe the opportunities, the destiny or someone else decided the things happening to them. People with high internal control points have more advantages in the information processing, creativity and work motivation than those with high external control points (D. hull Lei GeEr, Yu Wenzhao, etc., 2001).

In 2012, Peter D. Harms and Fred Luthans made a series of research about behavioral outcomes [24]. They found that implicit psychological constructs are effective predictors of behavioral outcomes but are rarely used in organizational settings because of real or imagined problems with measurement validity and administration. To address these concerns, they present a means of assessing implicit constructs quickly and easily by using psychological capital as an example [25].

Don J. Q. Chen, Vivien K. G. Lim published an article Strength in adversity: The influence of psychological capital on job search in 25 JUN 2012, which showed their study results. Their study examined the influence of psychological capital on job search among displaced employees [26]. On the basis of a sample of 179 retrenched professionals, managers, executives, and technicians, we found that psychological capital (self-efficacy, hope, optimism, and resilience) was positively related with displaced employees' level of perceived employability, a coping resource.

3. The Research Hypothesis

Because psychological capital is individual staff's positive psychological state related to work [27], therefore, employee's personal factors may have effect on the psychological capital. Here, we choose control point as variable to study its influence on psychological capital. Research hypotheses are as follows:

Hypothesis 1: employees' individual control has a positive influence on calm.

Hypothesis 2: employees' individual control has a positive influence on hope.

Hypothesis 3: employees' individual control has a positive effect on optimism.

Hypothesis 4: employees' individual control has a positive effect on confidence.

Hypothesis model is showed in **Figure 1**.

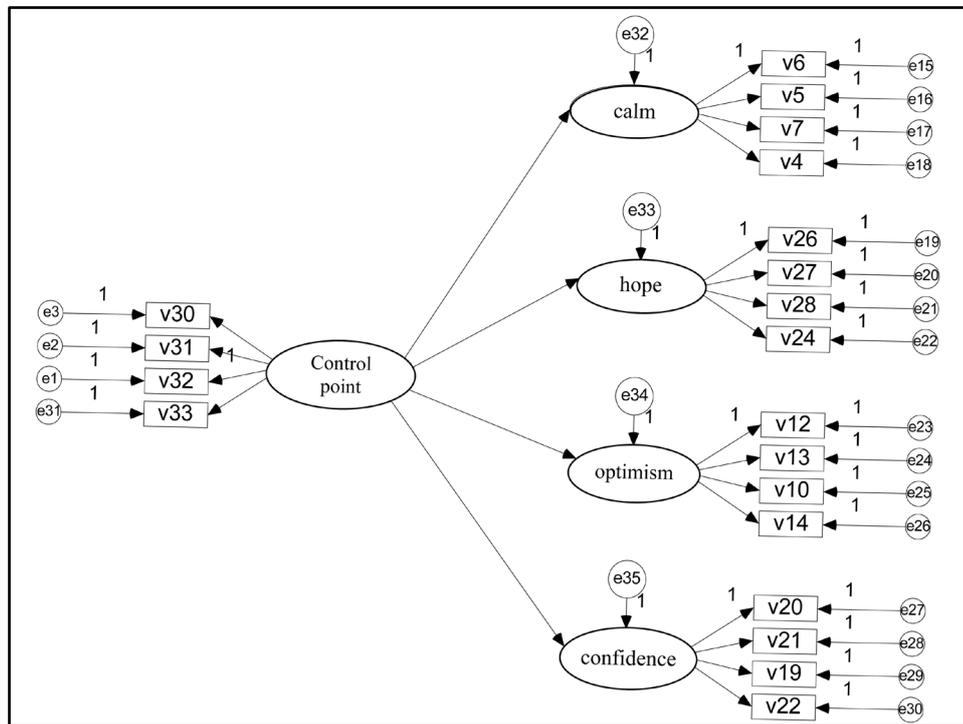


Figure 1. The hypothesis model diagram of control points' influence on the psychological capital.

4. The Research Methods and Tools

4.1. Research Method

We use the method of exploratory factor analysis and path analysis of structural equation, and use the software of SPSS13.0 and AMOS4.0.

The method of path analysis of structural equation, also called structure model, is used to analyze causal relationship between variables. The similarity of path analysis method and the traditional regression analysis method is that they can both analyze the relationship between independent variable and dependent variable, but there are obvious differences between them (Wu Minglong, 2007).

1) In the regression analysis model, variables are only divided into the independent variables and dependent variables, and these variables are all observed variables without error, but in a path analysis model, the independent variable and dependent variable can be observed variables without error, they can also be latent variables with error. Model analyzing the relation between latent variable called path analysis with latent variables (PA-LV for short). Therefore, residual error in path analysis model is more complex than it in the regression model.

2) In regression analysis model, after the dependent variables are explained by the independent variables, the residual errors are assumed to have nothing to do with the independent variables, while in path analysis model, the residual errors are allowed to associated with variables.

In addition, path analysis technology can use multiple indexes to test the fitting degree of the whole model, but the regression analysis model use only a handful of indicators to test. It is just because of the above characteristics of path analysis, it is widely used in psychology and behavioral science research.

Variables used in this study are all latent variables, therefore, we use path analysis method of SEM to modeling and analysis.

4.2. The Sample Conditions

1800 questionnaires (details in Appendix 2) were sent to Guangdong, Shanghai, Beijing, Henan, Guangxi, Zhejiang, Anhui, Sichuan, Chongqing, Yunnan and other provinces and cities, and 1574 effective questionnaires were taken back. The effective recovery rate was 87.4%. We take gender, age, years of working, education

background, the nature of the department, post of duty, technical titles, the number of people in your department as investigation contents (details in [Appendix 1](#)).

4.3. The Questionnaires Used and Test of Them

Questionnaire developed by the author and others in 2009 was used to test psychological capital, and it is composed of 16 items, factor analysis and reliability test results are shown in [Table 1](#). The inventory control point questionnaire, developed by Rotter in 1996 and revised by Wang Minghui in 2006, was used to test the sense of control, it includes a total of four projects. The survey data collected was used for factor analysis and reliability test, the results are shown in [Table 2](#).

5. The Results of the Study

The standard solution of control points' influence on psychological capital is shown in [Figure 2](#). The fitting degree indexes of the model are shown in [Tables 3-5](#). As we can see from the figure and table, the conception model of control points' influence on psychological capital fit the actual data very well. The standardized coefficients of control points' influence path to psychological capital are shown in [Table 6](#). Data analysis results show that the employees' individual control has significant positive impact on all of the four dimensions of psychological capital. The higher the score measured by the control point scale, the more the individual incline to internal control personality, while the lower the score, the more the individual incline to external control personality [28]. According to [Table 6](#), employees with internal control personality perform better in terms of psy-

Table 1. The questionnaire results of psychological capital (N = 1574).

| Project | Factor | | | | Common degree |
|---|--------|-------|----------|------------|---------------|
| | Calm | Hope | Optimism | Confidence | |
| V6 I can overcome the bad emotion in the work, and keep it stable. | 0.812 | | | | 0.732 |
| V5 I can adjust my own negative emotions quickly in the work. | 0.797 | | | | 0.713 |
| V7 I can face danger fearlessly in the work. | 0.726 | | | | 0.633 |
| V4 I can keep calm in the face of difficulties. | 0.659 | | | | 0.554 |
| V26 I have clear goals of work. | | 0.771 | | | 0.705 |
| V27 I have the patience to achieve the work objectives. | | 0.765 | | | 0.704 |
| V28 I work with full enthusiasm. | | 0.719 | | | 0.633 |
| V24 I am full of hope for the future work. | | 0.680 | | | 0.610 |
| V12 In work, I can always see the good aspects. | | | 0.774 | | 0.661 |
| V13 I think the work usually produces good result. | | | 0.744 | | 0.658 |
| V10 I always feel that the good things are more than the bad things in work. | | | 0.737 | | 0.591 |
| V14 I always believe that we don't need to be pessimistic in work. | | | 0.556 | | 0.533 |
| V20 I believe I can communicate with colleagues and external people well. | | | | 0.746 | 0.644 |
| V21 I am confident in the meeting to discuss something related to my work. | | | | 0.726 | 0.676 |
| V19 I believe I can participate in the discussion on company affairs well. | | | | 0.726 | 0.614 |
| V22 I believe I can find the better solution to solve the problems in the work. | | | | 0.610 | 0.548 |
| Rate of variance explained (%) | 40.567 | 8.775 | 7.660 | 6.803 | |
| The overall rate of variance explained | | | 63.804% | | |
| Cronbach a rate of variance explained | | | 0.889 | | |

Table 2. The questionnaire results of control points (N = 1574).

| Questionnaire project (all in reverse scoring) | Factor loading | Common degrees |
|--|----------------|----------------|
| In a competitive environment, it will hinder my outstanding performance | 0.813 | 0.617 |
| Often people will be successful, just because of luck | 0.800 | 0.640 |
| I usually don't set goals, because it takes too much time | 0.785 | 0.661 |
| When doing things which is beyond my ability, I think the chance of success is small | 0.703 | 0.494 |
| The cumulative variance explained | | 60.299% |
| Cronbach a coefficient | | 0.779 |

Table 3. The absolute fitting degree index of the structure model that control points' influence on psychological capital.

| GFI | AGFI | RMR | RMSEA |
|-------|-------|-------|-------|
| 0.961 | 0.949 | 0.041 | 0.043 |

Table 4. The appreciation fitting degree index of the structure model that control points' influence on psychological capital.

| NFI | RFI | IFI | TLI | CFI |
|-------|-------|-------|-------|-------|
| 0.946 | 0.936 | 0.960 | 0.952 | 0.960 |

Table 5. The brief fitting degree index of the structure model that control points' influence on psychological capital.

| PGFI | PNFI | CN | NC |
|-------|-------|-----|-------|
| 0.732 | 0.797 | 487 | 3.847 |

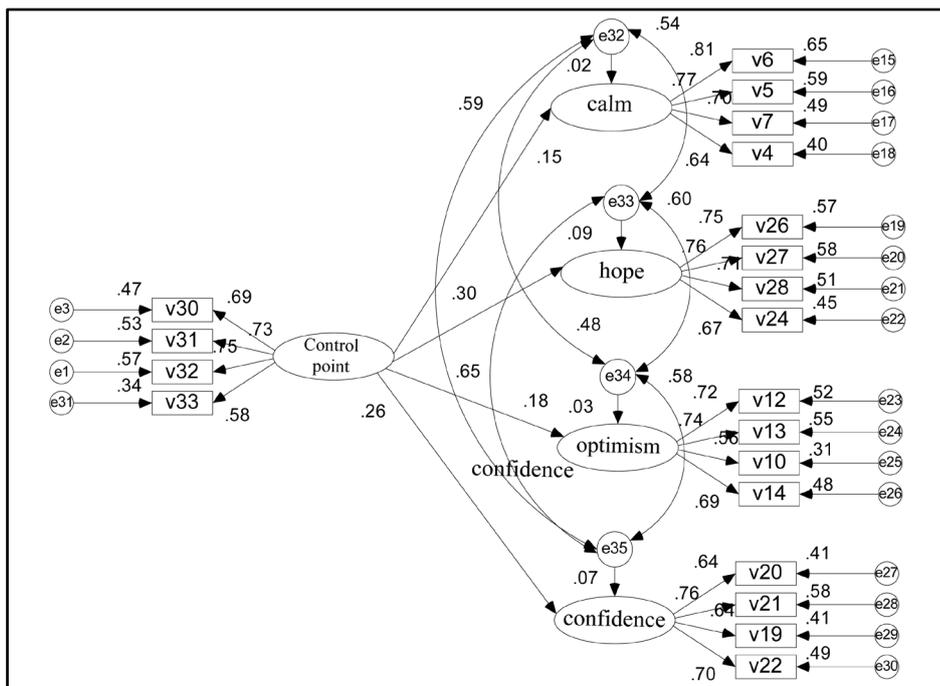


Figure 2. The schematic diagram of standard solution of control points' influence on psychological capital.

Table 6. The standard coefficient table of the control points' effect of path on psychological capital.

| Path direction | Non standardized estimate | Standardized error | Value of T | Standardized estimate |
|--------------------------|---------------------------|--------------------|------------|-----------------------|
| Calm—control point | 0.130 | 0.026 | 4.946*** | 0.154 |
| Hope—control point | 0.246 | 0.026 | 9.555*** | 0.303 |
| Optimism—control point | 0.134 | 0.025 | 5.471*** | 0.177 |
| Confidence—control point | 0.169 | 0.021 | 7.881*** | 0.260 |

Note: *** stands for $p < 0.001$.

chological capital than their counterparts with external control personality. When meeting things, they can cope calmly, keep peaceful mood; they work with clear goals and are full of hope to their work; they are able to explain the incidents in work in a positive way, they tend to be optimistic; they believe that they can finish work, and have confidence in their ability to work [29]. By contrast, employees with external control personality are easier to be impulsive, and cannot handle the incidents encountered in the work calmly; they have no clear work objectives, hold little hope for the future; they tend to explain things encountered in work in a negative way, and are easy to be pessimistic and lack of confidence in themselves. Through inspection, our research Hypothesis 1, 2, 3, 4 in this part are all valid.

6. Discussion

A study held by Miner, J.B. (1992) shows that the control points has a significant influence on employees' behavior performance, and employees with internal control sense perform better than those with external control sense in following aspects: processing complex information and learning, creativity and independent work, finishing work that need high motivation and great efforts. Lefcourt, H.M.'s (1992) research shows that control points could explain many differences in behavior of employees in an organization or in social situations. Predecessors have not yet studied the relationship between the control points and psychological capital, therefore, our research improved the existing theory system of control points and psychological capital [30]. At the same time, we have similar results with previous research: the first is that the employees with different control points have distinction in the aspect of psychological capital; second, employees with internal control personality perform better in terms of psychological capital.

7. Conclusions

In order to verify the influence of sense of control on psychological capital, this paper adopted questionnaires, used the method of exploratory factor analysis and path analysis of structural equation, and used the software of SPSS13.0 and AMOS4.0. to analyze data. Finally, we come to the conclusion: control points have positive impact on the four aspects of psychological capital.

In terms of psychological capital, employees with internal control personality perform better than employees with external control personality [31].

The previous literatures on psychological capital's influence factor are less. In order to improve the existing system of psychological capital theory, this paper, mainly explores what factors affect the psychological capital and how they affect psychological capital. Predecessors have not yet studied the relationship between the control points and psychological capital, therefore, our research improved the existing theory system of control points and psychological capital.

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Appendix 1

The questionnaire about the basic information of subjects investigated and the statistical results are put together in the following table.

Table A1. Basic information of subjects investigated data list (N = 1574).

| Demographic variables | Category | Number of people | Percentage (%) | Demographic variables | Category | Number of people | Percentage (%) |
|--|------------------------|--------------------------|----------------|-------------------------------------|----------------------------|------------------|----------------|
| Gender | Male | 645 | 41 | Nature of the department | State-owned enterprises | 299 | 19 |
| | Female | 908 | 57.5 | | Private enterprise | 610 | 38.8 |
| | Absence | 21 | 1.3 | | Joint ventures | 240 | 15.2 |
| Age | Less than 25 years | 708 | 45 | Post of duty | Government agency | 45 | 2.9 |
| | 26 to 30 years | 509 | 32.3 | | Public institution | 121 | 7.7 |
| | 31 to 35 years | 177 | 11.2 | | Other | 234 | 14.9 |
| | 36 to 40 years | 95 | 6 | Technical titles | Absence | 25 | 1.6 |
| | 41 to 45 years | 54 | 3.4 | | Top management | 76 | 4.8 |
| | 46 to 50 years | 13 | 0.8 | | Middle management | 245 | 15.6 |
| | More than 50 years | 12 | 0.8 | | Lower management | 306 | 19.4 |
| | Absence | 6 | 0.4 | | General staff | 802 | 51 |
| Years of working | Less than 1 year | 187 | 11.9 | Number of people in your department | Other staff | 129 | 8.2 |
| | 1 to 2 years | 367 | 23.3 | | Absence | 16 | 1 |
| | 3 to 5 years | 505 | 32.1 | | Senior professional titles | 87 | 5.5 |
| | 6 to 10 years | 300 | 19.1 | | Middle professional titles | 318 | 20.2 |
| | 11 to 15 years | 140 | 8.9 | | Junior professional titles | 378 | 24 |
| | More than 15 years | 61 | 3.9 | | Other | 740 | 47 |
| | Absence | 14 | 0.9 | | Absence | 51 | 3.2 |
| | Educational background | Below senior high school | 136 | | 8.6 | 1 to 5 people | 229 |
| Senior high school or technical secondary school | | 444 | 28.2 | 6 to 10 people | 332 | 21.1 | |
| Junior college | | 512 | 32.5 | 11 to 15 people | 216 | 13.7 | |
| Undergraduate course | | 415 | 26.4 | 16 to 20 people | 144 | 9.1 | |
| Master or doctor | | 62 | 3.9 | 21 to 30 people | 166 | 10.5 | |
| Absence | | 5 | 0.3 | More than 30 people | 471 | 29.9 | |
| | | | | Absence | 16 | 1 | |

Appendix 2

Hello! We are doing a survey project, this is a questionnaire about your idea of your feeling in work. Our aim is to find out what constitutes the psychological capital. Thank you for your cooperation!

Your three-minute-participation is greatly appreciated for our work. All your answers will be kept secret. Only general results will be submitted for final report.

- 1) Can you overcome the bad emotion in the work, and keep it stable?
A. Yes B. No C. At times
- 2) Can you adjust your own negative emotions quickly in the work?
A. Yes B. No C. At times
- 3) Can you face danger fearlessly in the work?
A. Yes B. No C. It depends
- 4) You can keep calm in the face of difficulties.
A. Yes B. No C. At times
- 5) You have clear goals of work.
A. Yes B. No
- 6) Do you have the patience to achieve the work objectives?
A. Yes B. No C. It's hard to say
- 7) You work with full enthusiasm.
A. Completely agree. B. Agree. C. Disagree
- 8) Are you full of hope for the future work?
A. Yes B. No
- 9) Can you always see the good aspects in work?
A. Yes B. No C. Just so so
- 10) Do you think the work usually produces good result?
A. Yes B. No
- 11) Do you feel that the good things are more than the bad things in work?
A. Yes B. No C. At times
- 12) You believe that we don't need to be pessimistic in the work.
A. Yes B. No
- 13) You think that you can communicate with colleagues and external people well.
A. Yes B. No
- 14) Are you confident in the meeting to discuss something related to your work?
A. Yes B. No C. It depends
- 15) Do you believe that you can participate in the discussion company affairs well?
A. Yes B. No C. It depends
- 16) Do you believe that you can find the better solution to solve the problems in the work?
A. Yes B. No C. It depends.