

Under the Background of Big Data Mental Health Assessment and Countermeasures of Driving School Employees in Jilin Province

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Abstract. Under the background of big data, it is possible to carry out a comprehensive mental health assessment and take effective countermeasures. However, how to make the mental health evaluation results as true and effective as possible, so as to carry out targeted management and maintenance, so as to improve the psychological quality of employees. In this study, the SCL-90 test of the mental health of driving school employees was used as the starting point to establish the group norm of SCL-90 for driving school employees. A cluster sampling method and symptom self-rating scale (SCL-90) were used to investigate the mental health of 64 Jilin driving school employees and compare the results of SCL-90 were compared with the Chinese norm. By means of psychology and statistical methods, and through the analysis of the methods and results, the paper puts forward the strategies and methods for mental health management and promotion of driving school employees. In order to arouse the awareness of the importance of mental health of driving school employees, the author makes a preliminary discussion on the personalized mental health education.

Keywords: The Background of Big Data, Driving School Staff, Symptom Self-rating Scale, Mental Health

1 Introduction

In the early 20th century, after the concept of mental health was proposed, scholars both domestically and internationally have produced numerous research results on mental health. As of now, the academic community's research on mental health has shown diversified characteristics in terms of research subjects and research methods. In addition to the commonly used questionnaire and interview methods in psychology, meta-analysis methods have also begun to be used by researchers[1].

From the perspective of research methods and tools, scholars nowadays mainly use psychological measurement and survey questionnaire methods for employee mental health surveys. The relatively frequently used detection tools mainly include the SCL-90 Symptom Checklist, Mental Health Diagnostic Test, Cattell Sixteen Personality Factor Test, Anxiety Self Rating Scale, and Depression Self Rating

Scale.[2] These measurement tools are relatively scientific, so both domestic and foreign employees will use these tools for measurement. With the development of society and the change of enterprise management mode, the mental health status of employees has been paid more and more attention to by enterprises." Promoting the mental health of enterprise employees will not only improve the cohesion and team spirit of enterprises, but also improve the efficiency and economic benefits of enterprises," he said. In order to understand the mental health status of driving school employees, there have been some studies on the mental health status and influencing factors of driving school employees in China. The staff of driving school have the characteristics of remote work place, scattered, few contacts, long rotation period, long-term monotonous, repetitive, mechanical work and life environment, plus the boring and monotonous part-time life. In order to understand the mental health status, analyze the influencing factors, discuss the intervention measures, and improve the mental health level of the staff, this study carries on the mental health evaluation and countermeasure analysis[3].This paper expounds the reasons that affect the mental health of the driving school employees. The purpose of this kind of education is to develop and improve the individual psychology of the employees.

The psychological health of employees in enterprises has always been an important content and goal of human resource construction, and it is also an important factor related to the construction of the enterprise's workforce[4]. How to improve the psychological health of employees, how to solve the problems existing in their performance, how to eliminate unfavorable factors for employees, and how to take effective management measures based on the job content, characteristics, and nature of employees are of great significance for the improvement of the overall psychological health of employees in the enterprise.

2 Research Object and Research Method

2.1 Research Objects

This topic selects 64 existing employees of Zhengda Driving School in Gong zhu ling City, Jilin Province as research objects.

To explore the causes of employees' psychological problems, mainly using the Symptom Checklist 90 (Scl-90) and psychological interview to explore the psychological problems caused by work or life process and the measures taken.

The original data generated by the test were analyzed and processed. Using the method of statistical analysis to cause the driving school staff psychological problems of the main component analysis, and then analyze the driving school staff mental health level and countermeasures.

2.2 Research Methods

(1) SCL-90 scale was used for measurement

In order to comprehensively understand the mental health status of employees, SCL-90symptom list (SCL-90) with high reliability and validity was used to measure the test tool The SCL-90 was administered online and the duration of the test was about 30 minute A clock. The support platform is a company's school psychological management system, hereinafter referred to as the psychological system. The

questionnaire is simple and easy, suitable for group testing [4].

There are a total of 90 items tested by SCL-90, therefore, its outstanding characteristics mainly lie in three aspects: large capacity, sufficient description and reflection of symptom situations, and accurate description of subjects' consciousness symptoms. Further analysis reveals that the content of the SCL-90 test involves an extremely rich content of psychological symptoms, specifically from the four dimensions of the subject's sensation, emotion, thinking, and behavior. It is further refined into items such as the subject's lifestyle habits, dietary habits, sleep habits, and interpersonal relationships, involving 10 related factors of psychological symptoms. These 10 psychological symptoms can be specifically expressed as: somatization symptoms, obsessive-compulsive symptoms, interpersonal sensitivity, hostility, anxiety, depression, paranoia, terror, and mental illness, which can be roughly classified into four types of mental health conditions.

2.3 Interview Method

On the basis of the scale, interview method is adopted to deeply understand the actual situation and physical and mental reaction of employees, and one-to-one interview is conducted for employees with psychological abnormalities. The quantitative and qualitative research methods of parameters comprehensively measure the psychological problem existing in all aspects of driving school employees and comprehensively evaluate the methods of improving the comprehensive quality [5].

3 Research Results and Data Analysis

3.1 Statistics and Analysis of SCL-90 Results

Principal component analysis of the mental health status of driving school employees and related data analysis of the distribution of problem employees: Among the 64 people (measured number), 8 people (12.5%) showed abnormal mental system, of which 3 people (4.69%) had poor mental health status, belonging to a class of key employees; In addition, there were 5 people (7.81%) with poor mental health status, belonging to the second class of key employees; After interview, there were 5 people whose symptoms were not obvious or had been eliminated, and 58 people whose psychological system showed no problems were in good mental health, belonging to Three categories are not focused on employees.

Table 1. SCL-90 Assessment Statistical Results

A, search conditions: Department Jilin Zhengda Driving School	Grade: 201802	Number of
testers: 64		
B. Statistical time: 2018-12-5 17:28:51		
C. Statistical results:		
1. Very serious psychological problems (total score above 250) :0 people, accounting for the proportion of tested population: 0%		
2, there are obvious psychological problems (total score between 200-250) :3 people, accounting for the		

proportion of the tested population: 4.69%							
3, there are light (certain) psychological problems (total score between 160-200):5 people, accounting for the proportion of the tested population: 7.81%							
4, the average score of the total score :122.12							
(The total score is the sum of the 90 items; Each person's total score is added up and divided by the number of people to obtain the average total score.)							
5. The total mean score:1.36							
(The total score represents the overall symptomatic index divided by 90; the total score of each person is added together and divided by the number of people.)							
6. Average number of positive items: 21.41							
(It refers to the number of positive items per person on a score of 2 - 5, plus the total, divided by the number of people)							
7. Average score of positive symptoms: 2.13							
(Each person's average of the positive symptoms is added together and divided by the number of people)							
8. Average score for each factor:							
(Each person's score of a single factor is added together and divided by the number of people to obtain the average score of the factor for all people)							
Numbering	factor	The average score of this reviewer	The average score of the general population	>1 standard deviation	> 2 standard deviations	> 3 standard deviations	Fractional grade (Factor score≤ normal average score)
1	Somatization	1.35	1.37	1.85	2.33	2.81	Yes
2	Obsessive symptoms	1.6	1.62	2.14	2.66	3.18	Yes
3	Sensitive relationships	1.38	1.65	2.26	2.87	3.48	Yes
4	Depression	1.34	1.50	2.09	2.68	3.27	Yes
5	Anxiety	1.32	1.39	1.82	2.25	2.68	Yes
6	Hostiles	1.38	1.46	2.01	2.56	3.11	Yes
7	Horror	1.22	1.23	1.64	2.05	2.46	Yes
8	Paranoia	1.31	1.43	2.00	2.57	3.14	Yes
9	Psychosis	1.28	1.29	1.71	2.13	2.55	Yes
10	Other	1.35	1.39	1.79	2.19	2.59	Yes
Description: The meaning of the grade is							
There are significant differences between interpersonal sensitivity and depression factors, which have important value and special significance.							
1. For an individual evaluator: By comparing and analyzing the evaluator's score for a certain factor with the norm score for that factor, the evaluator's score level can be determined. Specifically:							
If the score is lower than the norm score, the evaluator's rating level can be defined as: less than 1, which actually reflects that the evaluator has not shown corresponding symptoms on this factor;							

If the score is within the range of a standard deviation between the norm score and the factor, the rating level of the evaluator can be defined as 0-1, indicating that the evaluator also does not exhibit corresponding symptoms on this factor;

If the evaluator's score is within the range of one standard deviation and two standard deviations, the rating level of the evaluator is defined as: 1. Based on this, it can be determined that the evaluator exhibits certain symptoms in the psychological factor;

If the evaluator's score falls within the range of two standard deviations and three standard deviations, then the evaluator's rating level can be determined as: 2. At this point, it indicates that the evaluator exhibits specific symptoms in this psychological factor, and further diagnosis needs to be made through professional psychological counseling methods;

If the specific score of the evaluator is greater than three standard deviations, the rating level can be defined as: 3. This level actually indicates that the evaluator has serious psychological problems, and symptoms related to this psychological factor are extremely severe, requiring medical examination and diagnosis, or receiving psychological treatment under the guidance of a doctor and taking medication based on medical advice.

2. For group measurements:

The average score of each factor can be used as a reference for evaluating the mental health status of the group.

Form2 The factor scores of SCL-90 of driving school staff were compared with the national adult norm($\bar{x} \pm s$)

Annotation: * $p < 0.05$ ** $p < 0.01$

Somatization	Chinese Normal person norm (N=1388)	Driving School (N=64)	T-value	z-value
Obsessive symptoms	1.37±0.48	1.35±0.43	-0.375	0.33
Sensitive relationships	1.62±0.58	1.60±0.56	-0.309	0.23
Depression	1.65±0.51	1.38±0.49	-4.470**	4.24**
Anxiety	1.50±0.59	1.35±0.55	-2.160*	2.03*
Hostiles	1.39±0.43	1.32±0.37	-1.485	1.30
Horror	1.48±0.56	1.38±0.55	-1.414	1.43
Paranoia	1.23±0.41	1.22±0.42	-0.220	0.20
Psychosis	1.43±0.57	1.31±0.50	-1.950	1.68
Other	1.29±0.42	1.27±0.40	0.069	0.38

There are significant differences between interpersonal sensitivity and depression factors, which have important value and special significance.

3.2 Interview Results

Among the 64 people measured, 8 people (12.5%) were found to be abnormal in their psychological system. Psychological counselors were organized to interview them one-on-one and divide them into ABC categories.

Class A: a variety of neurosis (severe nervous breakdown, anxiety disorder, obsessive-compulsive disorder, phobia, etc.), There are anxiety, pessimism, compulsion and other schizophrenia tendencies, psychological conflicts, serious

impact on normal life, work, and learners, such employees should immediately make appointments for consultation or hospital.

Class B: There are certain psychological problems, such as poor interpersonal relations are not coordinated, the new environment is not adapted. The new family formation, marriage etc. This kind of employee has a variety of worries and emotions, but still can persist in normal study contact work and life. The way to help them is to ask them to consult whenever they have any questions. reminding them of the importance of mental health, counseling when problems arise, or seeking resources to solve them.

Class C: Interviews with them can help prevent problems. Their symptoms are not obvious, for the time being or have been resolved, and when symptoms appear in the future, They can also be told to seek resources within the family to solve practical problems and thus to solve psychological problems. and psychological counseling agencies can provide help.

Of the 64 visiting staff. There are 3 type A employees with obvious psychological conflict. There are 5 Type B employees who have certain psychological problems but can maintain normal life. There were 58 Category C employees whose symptoms were not obvious had disappeared.

Some did not like their work style or working environment, but faced with a slightly higher income than other jobs, they had to passively workday in and day out.

It is suggested to do the work happily as what I love, treat the work with a positive attitude everyday, and teach a student to drive independently as a realization of self-worth [6].

In terms of life. The average driving school employee is 38 years old, which is the stage of the family with the old and the young, involving all kinds of life trifles every day. The most important thing is to pay attention to the young peoples study and homework and other problems, especially when facing stressful events, the psychology is not easy.

It is suggested to take the things at home as their own life must experience, adjust the correct cognition. Be happy to face and solve every little thing every day. Keep your stress in perspective.

In terms of interpersonal communication. In the interview, more than half of the employees reported psychological confusion in interpersonal communication, which is also the factor with significant difference in the detection rate of scl-90 scale. The psychological problems of this factor dominated the employees. The interpersonal communication of employees is extensive, including relatives, students, (opposite sex), bosses and so on. Due to the differences of the trainees' personalities, learning styles and other aspects, it is inevitable that some friction, conflict and emotional damage will occur in the process of interpersonal communication. Many employees either have a narrow range of communication or can't be honest with others. Some employees are self-centered and pay attention to their own status in interpersonal communication. They think too much about their own needs while ignoring the need and existence of others[7]. They lack concern and understanding for others. Some introverted students do not fit in with the community, unwilling to take the initiative to approach and communicate with them, resulting in employees also closed themselves, thoughts and feelings cannot be communicated and expressed ind in time, lonely, often complain about themselves, and even want to escape. Many employees

have symptoms such as anxiety, panic, loneliness and loss, loneliness, insomnia, and distraction caused by interpersonal relationship disorders, resulting in depression, loneliness and boredom[8].

It is recommended that employees get along with others in line with the principle of initiative and sincerity, understand the character trait of themselves and others, and pay more attention to the advantages of others. Master more methods of Interpersonal communication, know how to think in other people's shoes, seek common ground while reserving differences and care for others. We should not only respect ourselves, but also respect others: and understand their different personalities and lifestyles Communicate and get along harmoniously with others in equal manner.

3.3 Countermeasures to the Research Results

Set up a research group on driving school staff psychological assessment and complete the assessment plan for all saf; Establish confidential psychological files of employees and report them to the chairman; And summarize the data for statistic analysis; Implement the measures and models .of regular mental health maintenance and quality improvement; And promote enterprises to introduce EAP program.

Using the concept of positive psychology to enhance the positive experience in the personalized training of driving school staff.

The research content of positive psychology includes positive emotions, experiences and health, positive personality traits at the individual level, and the relationship between people and social environment at the group level.

The role of positive experience in personalization training of driving school staff.

The formation of positive psychological quality is a process of behavior and psychological experience. Positive psychology holds that the most effective way to develop individual positive personality, positive strength and positive quality is to enhance individual positive experience[9]. When an individual has more experiences, he will put forward higher demands on himself, and since such demands come from within the individual, it is easier to form certain personality characteristics. Therefore, in the personalized mental health education of driving school staff, we should focus on enhancing the positive experience of driving school staff.

(1) It can make the driving school staff release the psychological tension caused by negative emotions.

(2) It can enhance personal happiness, security and satisfaction, thus bringing a sense of accomplishment.

4 The Effect of Production

Through follow-up tracking and file building, individual talks after assessment, group auxiliary activities and training lectures, the implementation of employee assistance plan is studied in detail based on the actual situation of the enterprise , The organization leaders and employees are propagandised, promoted and educated with relevant knowledge. The following three effects were obtained:

4.1 Employee Level

Most employees have gradually developed a positive understanding of their organization and work[10]. The specific performance is as follows: (through the

comparison between before and after the project) most employees generally feel that the quality of life is improved, work performance is improved, work satisfaction is improved, work pressure is reduced, people can get along with others harmoniously, and work-life balance is promoted. Mental health benefits can also be specifically addressed.

4.2 At the Corporate Level

Improve production efficiency, reduce costs, retain talents, reduce absenteeism and condition rate, reduce accident rate, reduce medical costs, understand the real problems of employees, improve employee morale, increase the sense of belonging of employees, and establish the image of humanistic care of enterprises.

4.3 Manager-level

Reduce employee complaints, effectively handle the relationship between employees and subordinates, avoid getting involved in personal problems, help maintain performance expectations, have more time to focus on other issues, improve the pursuit of goals, improve employee relations, and lead the whole team more effectively.

5 Conclusion

Health is not simply a state proposed from a physical and physiological perspective, but should cover the physiological, psychological, and social adaptation aspects of the body, all of which have a good state. Especially with the deepening of economic globalization and the increasing depth and breadth of China's participation in the internationalization process, various industries are actively adjusting, innovating, and optimizing. At this time, people have increased their utilization of information technology, online platforms, and internet enterprises. Subsequently, the scope of people's activities has been greatly expanded, as well as the increasing diversity and closeness of social activities. In addition, the overall competitive situation has become increasingly severe, which has made psychological stress, psychological barriers and other factors particularly prominent and developed into a "chronic disease" in the current stage. In this context, people still need to continuously strengthen and improve their psychological quality, relying on it to ensure that they can meet social needs and new requirements of the times. At the same time, this aspect is precisely an important component of the HSE management system [11]. In practice, in addition to conducting regular employee physical examinations, enterprises also need to attach great importance to the issue of mental health diagnosis. And based on the psychological evaluation results, a more feasible mental health model is constructed by closely integrating the characteristics and needs of employees.

At the same time, maintenance and quality improvement should be identified as important aspects of HSE management, in order to ensure timely and moderate intervention in employees' existing psychological state. With effective psychological adjustment measures, employees' psychological state can approach an ideal level. Based on this, safety issues that may arise from psychological problems can be effectively avoided [12]. In addition, it can also better ensure the achievement of HSE management goals and create a more harmonious environment for the sustainable

development and efficiency improvement of the enterprise.

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