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The Impact of Work Stress on Employee Health: An Approach Based on Grounded Theory

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Abstract: *This paper uses a grounded theory approach to conduct semi-structured interviews with 15 employees of a large state-owned enterprise around the issue of employee work stress and physical and mental health. This was followed by a three-level coding with the help of NVIVO 11 to reveal the impact of challenge/hindrance stressor on employees' physical/mental health and the moderating effect of organizational support and self-efficacy on this relationship.*

Keywords: *challenge stressor, hindrance stressor, employees' health*

1. Introduction

Work stress can affect not only the psychological health of employees but also have a direct impact on their physical health [1]. Work stress such as high workload, unclear responsibilities, and organizational chaos have shown serious negative effects on employees' psychological and physical health. The cognitive transactional theory model explains well the process from stress generation to stress response and then to physical and mental health problems [2]. However, just as a saying goes as "stress generates motivation", the answer to the question that whether all work stress has only negative effects on all aspects of employees' physical and mental health has not reached a consensus yet [3]. The cognitive transactional theory model just considers all types of work stress as threats and ignores the positive attributes of work stress.

With the deepening of research, some scholars have proposed dual pressure based on the positive and negative attributes of pressure. Most scholars have studied job outcomes such as job performance and job satisfaction as results of challenge and hindrance stressor while few studies have focused on the effect on employees' physical-psychological health [4]. Therefore, this study will explore the effects of challenge and hindrance stressor on employees' physical-psychological health in order to enrich theories of work stress.

2. Definition of Related Concepts

2.1 Work Stress

Cavanaugh (2000) starts from the positive and negative attributes of work stress, and divides work stress into challenge stressors and hindrance stressors [5]. Challenge stressors are what an individual believes that it can be overcome with certain efforts, and after completing relevant work requirements and overcoming difficulties, can generate benefits and rewards for their work performance and personal development, and produce a positive and hard work attitude stress, such as workload, job complexity, job responsibilities, etc. Hindrance stressors are stresses that can make employees feel frustrated, low self-esteem, anxiety, etc. They think that they are difficult to overcome and hinder their career development, such as organizational politics, work insecurity, and complicated interpersonal relationships at work.

2.2 Conservation of resources theory

Conservation of resources theory believes that individuals have an inherent and learned drive to maintain the quantity and quality of the resources they own and avoid the occurrence of situations that endanger the safety of these resources [6]. This theory is an important part of the stress response theory,

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and it can explain well how employees can adjust and protect themselves based on their own initiative after being affected by work stress. According to conservation of resources theory, the existence of work stress will lead to the consumption of external resources and psychological resources of employees; in the process of coping with work stress, employees will look for opportunities to obtain more resources to make up for their losses; if employees' resources continue to drain and gain failure to supplement will cause discomfort and negative emotions, and even emotional exhaustion, which will then cause adverse effects on the physical and mental health of employees [7].

However, the existing conservation of resources theory only focuses on the negative connotation of stress, and does not include "positive work stress" and its impact on physical and mental health into the research field, which makes it necessary to establish a theoretical study on the relationship between challenge and hindrance stressor and physical and mental health on the basis of experience.

3. Research Methods

3.1 Data Collection

This research conducted depth interviews with 15 employees of different job types (including engineering design, bidding, accounting, etc.), job levels, and seniority. Participants voluntarily accepted and were invited to conduct a 30-40 minute semi-structured interview. Respondents were between 24-55 years old, 9 females and 6 males.

The interview is semi-structured and its design principle is to make the interviewees talk about their work stress events and health status as freely and in detail as possible. Respondents were asked to recall a most memorable work stress event and recall their physical health at the time.

3.2 Data Analysis

In this study, the recording was transcribed into a file after each interview, and encoded with NVIVO11 software. After interviewing the 15th respondent, it was found that no new types of work stress events and health problems occurred, which reached saturation. After the interview, the two researchers independently followed Strauss' grounding method and repeatedly read 15 original voice transcription documents. The interview text was analyzed in a three-stage cycle, and open coding, axial coding and selective coding were performed, and compared and discussed each other to determine the final coding content.

3.2.1 Open Coding Process

After coding all interview transcription documents, we read the interview content carefully and adjust the position of nodes to make sure the coding results more accurate. Some of the coding contents are shown in Table 1-3, and the example taken m.n indicates the nth person of the mth interview.

Table 1: Open Coding (Work Stress Events).

Types of stressful events at work	Examples
High workload	1.1: Sometimes the workload is relatively large, therefore I need to work overtime
Disordered organizational structure	3.4: Because we are several units re-integrated to come together, there are inevitably some not quite adapted to the place
Unskillful job skills	4.3: Learning new skills is my main stressor
…	…

Table 2: Open Coding (Health Problems).

Health Problems	Examples
Dizziness and headaches	1.3: I get dizzy sometimes and have a headache so I can't do anything then
Shoulder, neck, back and lumbar spine problems	2.1: I am in trouble with cervical and lumbar spine problems 3.1: I need to sit for a long time at work, so I often feel sore in my shoulder blades
Sleep problems	2.1: We often work all night so that my body is extremely overloaded, and it is difficult for me to fall asleep at ease.
Anxious	4.2: When bidding, I always worry about the bids being missed and abolished, so I feel very nervous at work.
Impatient and agitated	3.2: If I do something repeatedly, I would get bored and have no patience
…	…

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Table 3: Open Coding (Perceived Organization Support and Self-efficacy).

Perceived Organization Support and Self-efficacy	Examples
Colleagues or units give help	1.3: At work, I often consult with other colleagues and then report to the leader so that I can spread pressure to other colleagues
Work outcomes are affirmed	5.2: When I am busy with my work, I will be more fulfilled and have a sense of accomplishment
Propose a new way to find the answer	5.2: I will check Baidu by myself, or consult someone who has done it
…	…

3.2.2 Main Axis Coding Process

In order to further integrate the nodes, we carried out the main axis coding process, trying to classify free nodes into specific tree nodes. Each tree node can include multiple different child nodes. Combining with the related literature in the field of work stress, we combined the challenge-hindrance binary stress model to perform main axis coding on text nodes. Through the quantitative statistical function of the NVIVO11 software on the coded information, the proportion and quantity of the node content in the relevant text are counted. The results are shown in Table 4.

Table 4: Node level and material information.

Tree nodes	Child nodes	Number of node material sources	Reference points
Challenging stress	Workload	3	3
	Job requirements and skills do not match	2	2
	Heavy work responsibility	5	5
	Tight	3	3
Hindrance stress	Team communication and collaboration are not smooth	2	2
	Lack of control	3	3
	Interpersonal pressure	1	1
	Organizational structure does not match	1	1
Organization support	Valued in the organization	1	1
	Colleagues or organization give help	1	1
	Work results are affirmed	1	1
Self-efficacy	Develop a complete work plan for yourself	1	1
	Propose a new way to find the answer	1	1
	Have confidence to be able to deal with unexpected events	1	1
Physical health	Dizziness and headache	4	6
	Eye problems	3	3
	Shoulder, neck, back and lumbar spine problems	9	12
	Gastrointestinal problems	2	2
	Gynecological issues	2	2
	Obesity	2	2
	Sleep problems	7	9
	Knee joint problems	1	1
	Heart problems	1	1
	Liver problems	2	2
	Gout	1	1
	Hyperlipidemia, hyperglycemia and hypertension	2	2
	Asthma	1	1
Mental health	Anxiety	7	10
	Impatience	4	4
	Be agitated	1	1

3.2.3 Selective Coding Process

On the basis of open coding and axial coding, we combined the original documents to analyze the logical relationship between the above nodes. The story line surrounding these nodes can be summarized as follows: In the daily work environment, employees usually feel all aspects work stress. On the one hand, work stress can cause physical and psychological discomfort for employees and endanger their physical and mental health. On the other hand, work stress can also stimulate employees. Moreover, in the process of work stress on employees' physical and mental health, organizational support and employees' sense of self-efficacy can alleviate the adverse effects of work stress.

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4. Conclusion

Through research on grounded theoretical methods, we found that there is a difference between "positive" and "negative" in work stress. When facing challenging stress, employees will show positive work attitudes and behaviors, which will have a positive impact on their physical and mental health. When facing hindrance stress, employees will have negative emotional experience, which will negatively affect their physical and mental health [8]. Faced with the physical and mental health problems caused by work stress, employees with a high level of perceived organizational support can use organization's help to resolve some negative effects caused by work stress. Employees with high self-efficacy have strong subjective initiative and are able to turns work stress into a driving force for progress, turning negative effects into positive effects.

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The views represented in this article are those of the individual authors only.

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