Research on Problems and Countermeasures of Online Home Office of Enterprise Employees under the COVID-19 Epidemic

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Online home office refers to a new type of office model in which the public uses a network system to perform and process work tasks at home in specific circumstances. During the COVID-19, employees' online home office work provided guidance for enterprises' resumption of work and production. This mode can provide more time for production work, balance employees' work and life, and improve work efficiency to a certain extent, but still exposed some problems. On the basis of introducing the concept of online home work for enterprise employees and the literature review, this paper mainly adopts the questionnaire survey and video interview method, and distributes questionnaires to employees of small and medium-sized enterprises in Jiangsu Province of China from November 8, 2022 to March 8, 2023. 304 effective questionnaires and descriptive responses

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from three interviewees were returned. With processing the data, independent variables, such as difficult to achieve physical management, immature enterprise security technology, reduced communication among employees, reduced enterprise cohesion, and imperfect legal system and dependent variables worked from home online are significantly correlated at the 0.01 level. The paper analyzes the problems existing in online home work for enterprise employees, and proposes management suggestions and countermeasures to solve the problems in online home work practice for enterprise employees.

1. INTRODUCTION

The outbreak of the COVID-19 pandemic has posed a huge threat to the health of the global public, while also severely affecting the normal operation of enterprises. In order to effectively respond to the threat of the COVID-19 pandemic, local governments encourage enterprises to implement the remote work from home policy for employees to ensure public health and safety [1-5]. Remote work from home for enterprise employees is a new type of online remote work model, aimed at helping enterprise employees achieve online work at home through the network, thereby effectively reducing interpersonal communication and preventing the spread of the epidemic. Against the background of the outbreak of the COVID-19 pandemic, the remote work from home model has been widely applied in many enterprises, which has a certain positive effect on enterprises to improve efficiency and employees to maintain a balance [6,7].

The COVID-19 pandemic broke out in early 2020, and by early April of the same year, almost nowhere was spared. Throughout the country, people were in a panic, transportation was suspended, community closures were managed, and the flow of personnel and materials was not smooth. Daily nucleic acid testing disrupted the already sluggish production and living rhythm. In order to contain the further spread of the COVID-19 pandemic, the government required some non-guaranteed enterprises to suspend operations, suppress some unnecessary personnel concentration and movement, and as for when to resume work, no one knew [8].

On the one hand, it is necessary to avoid unnecessary personnel gatherings, on the other hand, many tasks still need to be carried out [9]. Against this severe background, the traditional way of remote work from home for online enterprises is no longer a privilege, but a necessary response. Alibaba, Tencent and other large online enterprises have all launched the remote work from home method after the holiday.

Facebook and Google earlier stated that by the end of 2020, enterprise employees would be able to use the remote work from home method, and Twitter CEO Jack Dorsey also sent an email to all enterprise employees stating that as long as they were willing, after the epidemic, they could also choose remote work from home [10]. This new way of working remotely from home breaks the mindset that work can only be done in a traditional offline office [11]. At the same time, the outbreak of the epidemic has made the remote work from home a universal feature, and this new way of working has entered thousands of households. The development of big data Internet has also greatly accelerated the popularization of remote work from home [9]. However, with the in-depth implementation of remote work from home, some problems have also been discovered, which need to be solved urgently.

1.1 Concept of Online Remote Work for Enterprise Employees under the Covid-19 Pandemic

1.1.1 COVID-19

COVID-19, also known as novel coronavirus pneumonia,is a newly discovered acute respiratory infectious disease with the characteristics of urgency, high uncertainty of rumors and information, strong infectivity, etc. It has now become a major global public health event. COVID-19 first appeared in Wuhan, China, and broke out in many countries around the world in January 2020. It greatly affected people's lives and work through droplets, contact and even aerosols, and even caused casualties. People also realized that effective defense methods must be taken to deal with the spread of COVID-19. Against this special background,

the concepts of organizations and individuals regarding work and careers have been reshaped, and online remote work for enterprise employees has thus further developed.

1.1.2 Concept of Online Remote Work for Enterprise Employees

Karl Heinrich Marx mentioned the concept of online remote work in Das Kapital, referring to it as domestic labor. From a practical point of view, online remote work takes early domestic labor as its prototype, relying on rapidly developing Internet, Internet of things, cloud computing and other technological tools, to transfer data from mobile data terminals to work terminals online, enabling workers to complete work tasks at their place of residence and create value for employers [12]. The Federal Government Remote Work Guidelines believes that: In practice, online work is a work arrangement that allows employees to perform work at any time and during paid hours at an approved alternative location (such as residence, remote center). The outbreak of COVID-19 has further expanded online remote work. Because it not only conforms to the direction of the times and the practical needs of employers, but also is a powerful weapon to deal with public health events such as COVID-19, it has a strong social significance.

1.2 An Overview of the Existing Research

Under the COVID-19 pandemic, and in the context of the growing technological capabilities of enterprises, more and more employees are working remotely from home. The concept of online remote work was first proposed by American rocket scientist Jack Nilles in 1973. He believed that many satellite offices should be established around large cities and that people should use electronic devices for remote work. Online remote work means that people can leave their traditional office locations to complete work events. In the 1980s, the work-from-home model also began to emerge, but at that time not everyone had the ability to use this office model, only white-collar workers had the privilege to choose to work from home, while online remote work is a kind of online remote work where employees work from home and perform various task work. This office model reduces face-to-face communication and contact between people, to a certain extent suppressing the spread of the epidemic, and has been widely used in many

enterprises, exerting unique advantages in sudden public health events. Sachiko Kazekami indicates that appropriate online home office time can improve labor productivity, but if this type of working time is too long, online home office may reduce labor productivity. Secondly, online home office can improve employees' work efficiency and life satisfaction [13]. In a survey released by Gartner on March 17, 2020, nearly 88% of organizations worldwide began to encourage or require employees to work from home online [14]. Barrero et al. found that even after the end of the epidemic, online home office will still become a normal way of working [15]. In this case, scholars have conducted research on the productivity, willingness, and future trends of working from home. In terms of legislation, the International Labor Organization formulated the Convention on Home Work as early as 1996 to protect the rights and interests of home workers. In 2002, organizations such as the European Trade Union Confederation and the European Business Confederation jointly reached the Remote Working Framework Agreement, establishing norms for enterprises to choose remote work. Wang Diyang and Liu Hong found that environmental, technological, and social factors have an impact on remote work [16]. Tan Xiaoyang mentioned that in the increasing trend of working from home, it can be predicted that more workers will face related issues of protecting the rights and interests of working from home models. Based on the characteristics of working from home, the subordination between employers and employees has been weakened to a certain extent, and the qualitative and handling of relevant issues under the existing labor law may deviate. When it comes to disputes between administrative organs and judicial organs, it is inevitable that there will be different judgments in the same case [17]. Therefore, it is necessary to conduct specialized research on the protection of the rights and interests of workers working from home. Zhang Nan pointed out that not having to be in the same physical space at all times, many enterprises have already realized the benefits of online remote work for employees in some cases. The DK Basic Skills Handbook for the Workplace sums up the benefits of online remote work first, such as saving space, increasing productivity, saving commuting time, improving work efficiency, achieving a healthier work-life balance, etc [18]. Therefore, when employees work at home, shared space and enterprise locations, etc., they need to have a space with

appropriate technical conditions. In this case, interpersonal relationships are becoming stronger. iiMedia Research (AI Media Consultancy) analyzed that online remote work can drive the development of enterprise office online, and during the prevention and control of the COVID-19 pandemic, enterprises adopting the online remote work model play a model role in the popularization of the general public, and have the opportunity to further develop. However, the enterprise's online remote work model is not complete, and it still requires the joint efforts of all parties to make it a regular practice [19]. We can study the practical conditions of online remote work, analyze its value and shortcomings, explore its improvement strategies and paths, and further deepen our understanding and thinking on its application scope and future development direction.

In summary, research on online remote work models has been conducted at home and abroad, and it has been discovered that a series of benefits have been brought about by this. At the same time, some problems have also been discovered. Research on the issues of online remote work for enterprise employees should also be paid more attention.

2. METHODS

2.1 Online Home Office Survey of Employees under the New Coronavirus Epidemic

The research objects selected in this paper are the employees of small and medium-sized enterprises in China. Their common feature is that most of the enterprises implement the online working mode at home, so they can objectively judge the shortcomings of the implementation of this mode [20]. According to the author's preliminary understanding, most of the studies on online home working mode and mature development are abroad. Although there are attempts in China, most of them are in response to the spread of COVID-19, and there are many uncertain risks in the implementation. The author hopes that through this analysis and research, some problems existing in this mode can be found and solutions can be put forward. Due to the limitation of manpower, time, space and region, this paper only distributes questionnaires to employees of small and medium-sized enterprises in Jiangsu Province. Most of the respondents were my senior students and their

colleagues. According to the actual situation of the research, this paper mainly adopts the questionnaire survey and video interview method. First of all, the author collected certain materials from the library of Huaiyin Institute of Technology and CNKI, and then used the Internet to design and fill in questionnaires for collection and analysis from November 8, 2022 to March 8, 2023. The questionnaires ask them what problems they have found with working from home online and what changes they would like to make. Finally, through the collected questionnaires and interview results, the author analyzes the situation of working at home online, finds problems and puts forward corresponding countermeasures.

3. RESULTS AND DISCUSSION

The questionnaire was designed based on the actual situation and estimated psychological state of employees in some small and medium-sized enterprises by reviewing a large amount of data on employees' online working from home under the COVID-19 epidemic. The questionnaire is divided into three parts, the first part is the basic information of the respondents, including gender, age, work level, etc., a total of four small questions. The second part is about the specific situation of online home working, with a total of 4 questions. The third part is to put forward some problems found according to the situation of online working from home in their own enterprises, with a total of 15 questions. The questionnaire made by the author is on the platform of the Questionnaire Star, and sent to my seniors and sisters in the form of web links and scanned code pictures, and asked them to share it with their colleagues. A total of 320 questionnaires were distributed, of which 304 were returned with an effective recovery rate of up to 95%. After the questionnaire is collected, SPSS software is used for data analysis. Among the 304 questionnaires effectively collected this time, frequency analysis, descriptive statistics，reliability analysis, and correlation analysis of the specific data are shown in Table 1, Table 2, Table 3, and Table 4.

The internal consistency reliability of Cronbach's Alpha coefficient of the variable is 0.853 greater than 0.7 (As shown in Table 3), the reliability of the questionnaire is qualified.

Table 1. Frequency analysis results of online working from home for enterprise employees under COVID-19

Item	Options	Frequency	Percentage (%)	Effective percentage (%)	Cumulative percentage (%)
Gender	male	170	55.9	55.9	55.9
	female	134	44.1	44.1	100.0
Age	20 to 25	146	48.0	48.0	48.0
	25 to 30	60	19.7	19.7	67.8
	30 to 35	51	16.8	16.8	84.5
	35 to 40	27	8.9	8.9	93.4
	Above 40	20	6.6	6.6	100.0
Working years	Within 1 year	119	39.1	39.1	39.1
	1 to 3 years	67	22.0	22.0	61.2
	4 to 6 years	64	21.1	21.1	82.2
	6 to 10 years	27	8.9	8.9	91.1
	Over10 years	27	8.9	8.9	100.0
Job level	Grass-roots	167	54.9	54.9	54.9
	Middle	94	30.9	30.9	85.9
	Senior	43	14.1	14.1	100.0
Affected by the epidemic, have you ever worked from home online	Yes	207	68.1	68.1	68.1
	No	97	31.9	31.9	100.0
Are you comfortable with working from home online?	Not fit in well	49	16.1	16.1	16.1
	Not fit in	64	21.0	21.0	37.1
	In general	60	19.7	19.7	56.8
	Adaptation	79	25.9	25.9	82.7
	Fit in well	52	17.3	17.3	100.0
Your current working status is	Working from home online	68	22.4	22.4	22.4
	Work/production	236	77.6	77.6	100.0
The average number of work days per week during your online home office	0 to 3 days	98	32.2	32.2	32.2
	3 to 5 days	146	48.0	48.0	80.3
	5 to 7 days	60	19.7	19.7	100.0
In the case of physical management is more	Very easy	9	3.0	3.0	3.0

Item	Options	Frequency	Percentage (%)	Effective percentage (%)	Cumulative percentage (%)
difficult, how do you think the company to verify the specific situation of employees	Easy	48	15.8	15.8	18.8
	In general	130	42.8	42.8	61.5
	Difficult	89	29.3	29.3	90.8
	Very difficult	28	9.2	9.2	100.0
Do you think the company can fully verify any accidents that occur while working from home online	Very good	27	8.9	8.9	8.9
	Good	30	9.9	9.9	18.8
	In general	74	24.3	24.3	43.1
	Bad	106	34.9	34.9	78.0
	Very bad	67	22.0	22.0	100.0
Do you think your company's network security system can cope well with cyber attacks	Very good	13	4.3	4.3	4.3
	Good	46	15.1	15.1	19.4
	In general	111	36.5	36.5	55.9
	Bad	109	35.9	35.9	91.8
	Very bad	25	8.2	8.2	100.0
How are you feeling during the outbreak	Very willing	24	7.9	7.9	7.9
	Willing	98	32.2	32.2	40.1
	In general	79	26.0	26.0	66.1
	Reluctant	76	25.0	25.0	91.1
	Very reluctant	27	8.9	8.9	100.0
How often you communicate with people while working from home online	Don't initiate	14	4.6	4.6	4.6
	When necessary	49	16.1	16.1	20.7
	Always	241	79.3	79.3	100.0
Do you think the decrease in face-to-face communication during online working from home will affect corporate loyalty	Very easy	13	4.3	4.3	4.3
	Easy	56	18.4	18.4	22.7
	In general	106	34.9	34.9	57.6
	Difficult	103	33.9	33.9	91.4
	Very difficult	26	8.6	8.6	100.0
When working from home online, do you feel that existing laws do not protect your rights	A lot of	64	21.0	21.0	21.0
	Relatively much more	100	32.9	32.9	53.9
	In general	86	28.3	28.3	82.2
	Few	33	10.8	10.8	93.0
	Hardly	21	7.0	7.0	100.0
Do you think there will be loopholes in the	A lot of	12	3.9	3.9	3.9

Item	Options	Frequency	Percentage (%)	Effective percentage (%)	Cumulative percentage (%)
regulations issued by the company when you work from home online	Relatively much more	49	16.1	16.1	20.1
	In general	123	40.5	40.5	60.5
	Few	90	29.6	29.6	90.1
	Hardly	30	9.9	9.9	100.0
Do you think the company's online operation system is mature and safe	Very good	24	7.9	7.9	7.9
	Good	30	9.9	9.9	17.8
	In general	76	25.0	25.0	42.8
	Bad	110	36.1	36.1	78.9
	Very bad	64	21.1	21.1	100.0
Do you have some difficult technical problems while working from home online	Often appear	60	19.7	19.7	19.7
	Appear	90	29.6	29.6	49.3
	In general	73	24.0	24.0	73.3
	Now and then	60	19.7	19.7	93.0
	Absence	21	7.0	7.0	100.0
How does your online home office environment compare to your business environment?	Very good	82	27.0	27.0	27.0
	Good	88	28.9	28.9	55.9
	In general	67	22.0	22.0	77.9
	Bad	58	19.1	19.1	97.0
	Very bad	9	3.0	3.0	100.0
If your company holds an online interest group sharing meeting, would you be willing to participate	Very willing	21	6.9	6.9	6.9
	Willing	45	14.8	14.8	21.7
	In general	60	19.7	19.7	41.4
	Reluctant	130	42.3	42.3	83.7
	Very reluctant	48	16.3	16.3	100.0
Do you think online working from home is better than traditional working?	Very good	60	19.7	19.7	19.7
	Good	67	22.0	22.0	41.7
	In general	88	28.9	28.9	70.6
	Bad	77	25.3	25.3	95.8
	Very bad	12	4.2	4.2	100.0
Are you as conscientious when working from home online as you are in a corporate office?	Very good	39	12.8	12.8	12.8
	Good	43	14.1	14.1	26.9
	In general	64	21.0	21.0	47.9
	Bad	115	37.8	37.8	85.7

Item	Options	Frequency	Percentage (%)	Effective percentage (%)	Cumulative percentage (%)
	Very bad	43	14.3	14.3	100.0
Do you think your supervisor can manage your team well while working from home online?	Very good	24	7.9	7.9	7.9
	Good	43	14.1	14.1	22.0
	In general	79	26.0	26.0	48.0
	Bad	106	34.9	34.9	82.9
	Very bad	52	17.1	17.1	100.0
Total			100	100	100

Table 2. Descriptive statistics

	N	Statistical data	Maximum value	Mean number		Standard deviation	variance
	Statistical data	Statistical data	Statistical data	Statistical data	standard error	Statistical data	Statistical data
Gender	304	1	2	1.44	.029	.497	.247
Age	304	1	5	2.06	.072	1.264	1.597
Working years	304	1	5	2.26	.075	1.301	1.693
Job level	304	1	3	1.59	.042	.725	.526
Affected by the epidemic, have you ever worked from home online	304	1	2	1.32	.027	.467	.218
In the case of physical management is more difficult, how do you think the company to verify the specific situation of employees	304	1	5	3.26	.054	.934	.873
Do you feel that the existing law cannot protect your rights	304	1	5	3.25	.056	.974	.949
Do you think your company's network security system can cope	304	1	5	3.29	.055	.965	.931

	N	Statistical data	Maximum value	Mean number		Standard deviation	variance
	Statistical data	**Statistical data**	**Statistical data**	**Statistical data**	**standard error**	**Statistical data**	**Statistical data**
well with cyber attacks How often you communicate with people while working from home online	304	1	3	2.75	.030	.531	.282
Do you think the decrease in face-to-face communication during online working from home will affect corporate loyalty	304	1	5	3.24	.057	.991	.982
Efficient N (listwise)	304						

Source: Statistical analysis by SPSS28.0.

Table 3. Reliability analysis of questionnaire

Statistics of reliability	
Kronbach Alpha	Number of terms
.853	5

Source: Statistical analysis by SPSS28.0.

Table 4. Correlation analysis of variables

		Affected by the epidemic, have you ever worked from home online	In the case of physical management is more difficult, how do you think the company to verify the specific situation of employees?	Do you think your company's network security system can cope well with cyber attacks	Do you think the decrease in face-to-face communication during online working from home will affect corporate loyalty	How often you communicate with people while working from home online	When working from home online, do you feel that existing laws do not protect your rights
Affected by the epidemic, have you ever worked from home online	Pearson correlation	1	-.384**	-.413**	-.284**	-.308**	-.299**
	Sig.（Double tail）		.000	.000	.000	.000	.000
	Number of cases	304	304	304	304	304	304
In the case of physical management is more difficult, how do you think the company to verify the specific situation of employees?	Pearson correlation	-.384**	1	.638**	.560**	.525**	.704**
	Sig.（Double tail）	.000		.000	.000	.000	.000
	Number of cases	304	304	304	304	304	304
Do you think your company's network security system can cope well with cyber attacks	Pearson correlation	-.413**	.638**	1	.553**	.509**	.551**
	Sig.（Double tail）	.000	.000		.000	.000	.000
	Number of cases	304	304	304	304	304	304
Do you think the decrease in face-to-face communication during	Pearson correlation	-.284**	.560**	.553**	1	.423**	.590**
	Sig.（Double	.000	.000	.000		.000	.000

		Affected by the epidemic, have you ever worked from home online	In the case of physical management is more difficult, how do you think the company to verify the specific situation of employees?	Do you think your company's network security system can cope well with cyber attacks	Do you think the decrease in face-to-face communication during online working from home will affect corporate loyalty	How often you communicate with people while working from home online	When working from home online, do you feel that existing laws do not protect your rights
online working from home will affect corporate loyalty	tail）						
	Number of cases	304	304	304	304	304	304
How often you communicate with people while working from home online	Pearson correlation	-.308**	.525**	.509**	.423**	1	.431**
	Sig. （Double tail）	.000	.000	.000	.000		.000
	Number of cases	304	304	304	304	304	304
When working from home online, do you feel that existing laws do not protect your rights	Pearson correlation	-.299**	.704**	.551**	.590**	.431**	1
	Sig. （Double tail）	.000	.000	.000	.000	.000	
	Number of cases	304	304	304	304	304	304

**. At the 0.01 level, two-tailed, the correlation is significant.
Source: Statistical analysis by SPSS28.0.

Table 5. Descriptive responses of video interviewees

Number	Job level	Age	Problems and solutions
1	Staff	28	When face-to-face communication is reduced and existing laws cannot properly protect their own rights and interests,it is hoped that enterprises can improve the online home office model and the government can issue laws to protect the rights and interests of workers
2	Middle manager	36	In the case of difficult physical management,we hope to carry out flexible changes in a humane way
3	Top manager	51	Since we all rely on the Internet to achieve office,we will actively organize technical personnel to improve network security and formulate reasonable new regulations

Table 4 shows the correlation analysis of the variables. 'In the case of physical management is more difficult, how do you think the company to verify the specific situation of employees?', 'Do you think your company's network security system can cope well with cyber attacks', 'Do you think the decrease in face-to-face communication during online working from home will affect corporate loyalty', 'How often you communicate with people while working from home online', 'When working from home online, do you feel that existing laws do not protect your rights' and 'Affected by the epidemic, have you ever worked from home online' are correlated. At the 0.01 level, the correlation is negative and significant (two-tailed).

As can be seen from the table, the proportion of men and women in this questionnaire is not much different, 56% and 44% respectively. The age of the subjects was also mainly concentrated in the 20-25-years-old, accounting for 48% of the overall proportion. Secondly, 20% of the test participants were aged 25-30. The author divided age groups according to national and social development. Since the nine-year compulsory education has been universal since 2000, the author did not include people under the age of 20 in the survey because almost all of them are studying.

Through the analysis of the working life of the respondents, the author found that the majority of employees who have worked for less than one year and one to three years, respectively, are 39 % and 22%, both of which are relatively large, fully indicating that most of the surveyed employees still have some fresh feelings about the enterprise and have not been fully polished because they have come to the enterprise for a short time. We can find the problem objectively.

55% of the tested people are grass-roots employees, and up to 68% of them have worked from home online, so we can conclude that most people have worked from home online during the new coronavirus outbreak. According to the data, 43% of enterprise employees are still more adapted to the form of online home office. However, according to the third part of the survey, most employees still think that there are some problems in the online home office mode that need to be solved.

3.1 Video Interview Analysis

Due to the limitation of time and space, the author cannot go to the companies of each investigator to have an interview with them. Therefore, the author chooses to invite three respondents to conduct wechat videos when they are resting during March 1, 2023 to March 12th, 2023. Staff 1's wechat video interview was conducted on March 1, 2023 Starting from nineteen thirty and ending at ten past twenty. Middle manager's wechat video interview was conducted on March 5, 2023 fromnineteen thirty to twenty twenty. Top manager's wechat video interview was executed on March 12, 2023 from nineteen thirty to ten past twenty. Combined with the data, descriptive responses from three interviewees are simply given by Table 5 for details.

According to the results of interviews and questionnaires, it can be seen that the problems of employees working from home online under the COVID-19 epidemic are as follows: difficult to achieve physical management, immature enterprise security technology, reduced communication among employees, reduced enterprise cohesion, and imperfect legal system. When enterprises implement the online home office model, there are certain obstacles, and employees have opinions on this. Therefore, all parties need to make efforts to change the existing problems in order to promote long-term development.

3.2 The Problems of Online Home Office for Employees under the New Coronavirus Epidemic

3.2.1 Physical place management is difficult to achieve

Personal subordination is an important feature of labor relations, and one of its manifestations is that workers provide labor in the physical place provided by the employer and accept the management of the employer. However, in the online home office mode, the change of office location leads to the two sides are not in the same physical place, and the employer is more difficult to manage daily attendance, such as late, early leave and absenteeism. According to the survey results, 62.5% of employees believe that they are not as serious as working

from home online as they are in the company, and up to 68.43% of employees believe that their superiors are not good at managing their team when working from home online. At the same time, the boundary between working hours and non-working hours during online home office is blurred, and it is difficult for employers to verify the actual overtime work of employees and determine the overtime hours [21]. The survey results also pointed out that in the case of difficult physical management, 73.69% of employees believe that the company does not do a good job of verifying the specific situation of employees. Based on the weakening of the physical control ability of the employer, once the employee online home office during the accident situation such as death and injury [22]. It is also difficult for the employer to effectively verify whether it is a work-related injury/death, which is easy to cause relevant disputes.

3.3 The Enterprise Network System is Immature

Although China's Internet information technology has developed rapidly in recent years, the core technology is not mature, and the information security of enterprises is still facing potential threats. As an open and free environment, the Internet still faces many risks. There are still many cyber hackers and Trojans that can still invade users' computer systems [23]. IDC report pointed out that the hacker attacks on enterprises showed an increasing trend year by year, more and more corporate information security incidents were revealed, such as SONY Video official website was hacked and user information leaked, Kaspersky headquarters was hacked and other incidents, not only brought serious damage to enterprises, but also caused interference to people's normal life. However, as an office mode that relies on the Internet, network security is particularly important.

However, at present, China has no perfect mechanism system to deal with risk attacks, and the means of illegal intrusion and theft are constantly upgrading, and the existing information technology is difficult to deal with the defense in time. Therefore, in the face of many attacks by network criminals, corporate data and business secrets are always at risk of being attacked and leaked. The research results show

that 69.75% of employees believe that their company's online operation system is not so mature and secure, and the company's network security system which has loopholes does not respond well to the cyber attacks. In addition, insufficient technical support will also lead to poor communication and coordination among employees, making it difficult to complete work tasks. The survey shows that up to 88.16% of employees have technical problems during the online home office, compared with the traditional office mode, when facing computer-related technical problems, seek help from colleagues or company technicians. But online home office leads to people can only solve by themselves or find another professional help, which affects the staff's work efficiency [24].

3.4 Communication between Employees is Reduced, and Corporate Cohesion is Reduced

For today's enterprises, good human resource management is not only the formulation and implementation of the system, but also the care for employees [25]. But online home working has limited communication among employees to some extent, It is difficult for enterprises to observe and understand the needs of employees in the first time and provide the necessary resources for employees. The survey results show that most people are still in a good emotional state during the COVID-19 pandemic, but due to the lack of face-to-face communication, 82.89% of employees have greatly reduced the frequency and willingness to communicate with others during the online home-working period. For example, if the company holds an online interest group sharing meeting, most people are reluctant to participate. It is precisely because of the lack of face-to-face communication, the enthusiasm of employees has been damaged to varying degrees [26], 70.4% of employees believe that this will affect their loyalty to the company. In this case, employees communicate and cooperate online, but the reduction of face- to-face communication makes new employees lack of understanding of their colleagues, which is not conducive to promoting the cohesion of the enterprise. Meanwhile, the reduction of necessary interpersonal communication is difficult to create a pleasant office environment, which is easy to increase the loneliness of employees and lack of mutual understanding, which is not conducive to the healthy development of the company in the long run.

3.5 The Legal System is Not Perfect

Online home office is still a new thing, and China's Labor Law, Social Security Law and other laws mainly consider the regulation and protection of traditional workers and labor relations. Special cases such as online home work have not been included in the application system of labor law, and the special needs of this model have not been paid attention to, enterprises can only use autonomy and internal system formulation for internal management, and according to the results of this survey, 66.45% of employees believe that there are some loopholes in the new regulations and agreements issued by enterprises in the mode of working at home on the offline of the new coronavirus epidemic. For example, economic issues, whether the performance and salary of employees during the online home office can truly reflect the work process and results, and employee safety issues, whether the accident of online home office is a work-related injury.

3.6 The Countermeasures to the Problems Existing in the Online Home Office of Enterprise Employees under the New Coronavirus Epidemic

3.6.1 Countermeasures at the Enterprise Level

3.6.1.1 Pay attention to the physical place management of home office

Doing a good job of employee attendance management is the basic work for employers to carry out employment management. During the online home office period, the employer shall continue to require employees to complete the attendance clock through the online OA system (such as Feishu, Dingding, enterprise wechat) and other forms to ensure that the basic attendance data of employees during the online home office period is mastered. At the same time, in view of the fact that during the period of employees at home, there may be reasonable circumstances such as the need to obey the arrangement for nucleic acid screening, antigen detection, and care for the elderly and children, which cannot guarantee the efficient state during working hours, the employer can also adopt a humane and flexible change method, allowing employees to use segmented attendance, flexible attendance and other ways to handle.For the overtime management during the online

home office period, it should be carefully arranged and strictly audited under the basic requirements of the enterprise leave attendance management system. On the one hand, the employer should strengthen the confirmation of the necessity of overtime work, and on the other hand, it should also do a good job in the verification of overtime work. In addition, in view of the recurrence and persistence of the current epidemic, employers should also do a good job of tracking the health status of employees and humanistic care, strive to achieve the physical and mental health of employees during the home office, and avoid work-related injuries and accidents as much as possible.

3.6.1.2 Improve the enterprise network system

Amid the widespread use of the online work-from-home model during the COVID-19 pandemic, one of the biggest risks facing businesses is corporate cyber security. At present, there are still many latent hackers and viruses in the internet environment, and a slight omission can bring great losses to the company. Therefore, enterprises need to strengthen the management of network procedures and office systems and upgrade the technology, such as the firewall to create a protective barrier between internal and external networks; For example, the system of terminal devices on the Intranet automatically distributes patches and fixes vulnerabilities in time. Due to the particularity of online home office, enterprises need to improve the remote technical support system. Centralized and unified management can not only improve the convenience of network operation and maintenance management, but also solve the technical problems in the work of employees by remote manipulation, reduce time waste and improve work efficiency. At the same time, before the enterprise carries out online home office, it is necessary to timely adjust and evaluate the office system and other important networks, identify problems in advance and repair them in time, and reduce the possibility of problems during actual use.

3.6.1.3 Online home office is combined with traditional office

Face-to-face contact contains all kinds of emotions. People have the feeling of meeting, saying that the meeting itself is an expression of feelings. The willingness of employees also shows that face-to-face contact cannot be completely replaced by electronic contact, and

employees need real offline communication to meet some emotional needs. At the same time, certain face-to-face contact can eliminate the negative impact of online home office on knowledge quality sharing. From the perspective of enterprises, proper face-to-face communication helps to supervise and inspect the operation process of employees. Enterprises can assess the work performance of enterprise personnel through regular offline reporting and exchange conferences, so as to promote the development of new ideas and new methods for more enterprises. At the same time, offline communication can also enhance the understanding of both sides and give the company a sense of belonging. In short, the construction of the model combining online home office with traditional office can not only allow employees to grasp their time freely and create a relaxed working atmosphere, but also facilitate enterprises to better supervise and control employees' performance, and improve the cohesion of enterprises to a certain extent.

3.6.2 Individual Level Countermeasures

3.6.2.1 Improve self-initiative and self-discipline

As an employee of the company, first of all, we should correctly position ourselves and know ourselves. When the management of the physical place is vague, we should improve our initiative and self-discipline, establish a regular schedule, set clear boundaries, and do the same as in the office, in a relatively independent space, work to the point, actively enter the work state, take a rest at the point, combine work and rest, and maintain full energy. Refuse to work in bed, do not mix work and life, online home office should also be careful, online and offline alike.

3.6.3 Active communication

During the online work from home period, employees need to be particularly proactive and keep in touch with colleagues, customers, and leaders as much as possible. If you have an emergency at work, please call directly or make a voice call, which will not delay each other's time, but also improve the focus and efficiency of work. If you need to have a video conference call, be sure to make adequate preparation before the meeting, advance notice, clear topics, open the required documents, prepare notes and follow-up actions, and pay attention to control the meeting time.

For leaders, when working at home, they should pay more attention to remote communication with subordinates, organize online meetings, give work guidance, do a good job of remote management and incentive, and create a good atmosphere of online home office for employees.

3.7 National Countermeasures

3.7.1 Increase human resource development

The government needs to increase the development of human resources. China is still a large country with a large population, and surplus labor is often seen, especially during the new coronavirus pandemic, when a lot of people are faced with laid-off workers. Therefore, it is not only necessary to put forward policy suggestions on population control, but also to slowly improve the quality of human resources and population, optimize the quality of population, and ensure the quality of employment. Therefore, the state can focus on training them and encourage them to master skills and practical knowledge. In many cases where online work is required at home, they can master certain computer skills and become self-sufficient when encountering technical problems at work, reducing the time spent consulting everywhere and improving work efficiency.

3.7.2 Establish standardized and systematic related policies and systems

In the absence of a relevant legal system for the online home office mode in China, the state should also attach importance to this mode of office, formulate appropriate rules and regulations according to public suggestions and expert guidance, clarify the rights and obligations of enterprises and employees during the online home office period, and promulgation relevant policies to regulate it. Reduce labor disputes between enterprises and employees in terms of salary and safety.

4. CONCLUSION

This research aims to analyze the problems existing in online home work for enterprise employees under the COVID-19 Epidemic. The difficult to achieve physical management, immature enterprise security technology, reduced communication among employees, reduced enterprise cohesion, and imperfect legal system

variable has a negative and significant influence on worked from home online variable. The management suggestions and countermeasures should be focus on paying attention to the physical place management of home office, improve the enterprise network system, combining online home office with traditional office, improving self-initiative and self-discipline, engaging actively communication, increasing human resource development, and establishing standardized and systematic related policies and systems.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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