



The Influence of Workplace Fun on Employee Creativity: The Mediating Effect of Workplace Friendship and the Moderating Effect of Personality Types

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Abstract

Based on the Conservation of Resources Theory, the study established and tested the relationship of workplace fun, workplace friendship, employee creativity and personality type. The results show that: 1) workplace fun has a positive impact on workplace friendship and employee creativity, 2) workplace friendship plays a mediating role between workplace fun and employee creativity, and 3) personality type plays a moderating role between workplace fun and employee creativity.

Subject Areas

Sociology

Keywords

Workplace Fun, Employee Creativity, Workplace Friendship, Personality Type

1. Introduction

With the change of generations, the employees who were born in the 80s and 90s have gradually become the main force of the company. How to explore the creativity of these employees is the key to the development and progress of the enterprise. Unlike older employees, these employees of new main force have begun to transition from material needs to spiritual needs, such as a relaxing and interesting working environment and simple and friendly workplace interpersonal relationships. The study found that interesting activities that occurred inside and outside

the workplace, such as tea breaks, snacks, and parties, were associated with many positive outcomes and significantly increased employee job satisfaction, colleague trust, organizational tolerance, work input, work enthusiasm and innovation [1]. Although creativity research suggests that certain social processes are critical to creativity [2], there are few empirical studies to investigate how workplace conditions trigger social interactions that promote creativity [3].

Workplace friendships are informal relationships in the workplace, and the social capital embedded in these relationships is important to cultivate creativity. Individuals who acquire workplace friendships can obtain emotional support and resource support at work, which reduces innovation costs and enhances the innovation motivation of R&D personnel [4]. Friendship can also bring respect and understanding to the individual, which promotes innovative work within the organization [5]. However, there is relatively little research on whether workplace fun can trigger workplace friendships and then boost creativity. Therefore, introducing workplace friendship as mediator, this study considers that the informality and sociality of fun activities provide employees participating in these activities with the opportunity to develop workplace friendship and help individuals to obtain more resources and thus enhance creativity.

Employee creativity is the ability of individuals, while individuals with different personalities may have different preferences for social activities. Introverted personality is relatively quiet, silent and conservative [6]. Extroverted personality is usually more cheerful, energetic, talkative, active participation in social activities, and more attention to the external environment [7]. Some scholars have found that initiative, extraversion, agreeableness and openness have positive effects on colleagues' relationships and employees' creativity [8]. Therefore, this study introduces personality type to explore its moderating effect on workplace fun and employee creativity.

The innovation points of this study are as follows. First, this study explores how organizations can cultivate and stimulate creativity through social processes. This study extends the impact of workplace fun on employee creativity and opens the "black box" between workplace fun and employee creativity by introducing workplace friendship. Second, from the perspective of individual personality differences, this study studies the moderating role of introvert-extrovert personality, which is conducive to enterprises taking more effective targeted measures for delicacy management of "social butterfly" and "social phobia" employees. Third, creating fun in the workplace and protecting employees' right to rest is in line with human nature management and the mainstream social values. In the Civil Code of the People's Republic of China, which came into effect on January 1, 2021, the right to rest is clearly added to the part of the right to personality, which is parallel with the right to life, body and health. This is not only a legislative improvement, but also a declaration to respond to practical needs. Protecting employees' right to rest, to some extent, is to protect work efficiency and the long-term fate of the enterprise.

2. Theory and Hypothesis

2.1. Workplace Fun and Employee Creativity

Ford, McLaughlin, and Newstrom (2003) [9] show workplace fun to be a work environment that is social, entertaining and enjoyable through enjoyable and fun activities that make employees feel relaxed and happy, positively affecting individual and group attitudes, behavior and productivity. In the 1980s, some scholars found that the success of various American enterprises was closely related to the way of integrating work and play, which aroused social attention and was applied by multiple enterprises in the United States, the United Kingdom and other countries.

According to the Conservation of Resource Theory, individuals will ensure that they are located at a relatively satisfactory resource level for a long time. Innovative behavior will consume certain resources and bring certain risks to individuals, so when resources are insufficient, individuals will reduce innovative behavior; when individual resources are sufficient, employees will adopt innovative behavior to obtain the return resources after successful innovation [4]. By organizing social activities, celebrations, parties and other activities of workplace fun, enterprises can create a fine social atmosphere, which is conducive to mutual communication between employees, and help employees to obtain more emotional resources, technical resources and conditional resources, so as to build up the resource system needed for individual innovation. On the other hand, innovation will consume resources. In the context of resource loss, the supplement and increase of resources are especially important. The relaxed and free atmosphere and happy mood brought by fun activities such as birthdays, festivals, tea breaks and celebration parties can enable employees to get a short rest, relieve fatigue, and compensate for the pain caused by resource consumption due to work. Interpersonal communication and interaction contain a large number of opportunities for resource investment, which can help employees to replenish resources and recover from resource loss more quickly, so as to devote themselves to the next stage of work with a fully blooded resurrection posture. In conclusion, this study proposes the following hypotheses:

H1: Workplace fun has a significant positive impact on employee creativity.

2.2. The Mediating Effect of Workplace Friendship

Since the 1970s, the concept of workplace friendship has gradually emerged and attracted the attention of scholars. Berman, West, and Richter Jr. (2002) [10] put forward that workplace friendship refers to an informal and voluntary workplace interpersonal relationship between employees with mutual trust, dependence and common interest in the organizational environment, which has the characteristics of non-exclusive, informal and voluntary nature.

Social activities in the workplace can increase communication between employees, allowing employees to share their personal stories and experiences in a more comfortable environment, providing opportunities to discover common interests, which contributes to building and deepening workplace friendships. In addition,

social activities, celebrations, gatherings, and more individual freedom for employees in the workplace can all help break down hierarchical and departmental barriers, increase communication and interaction among employees at different levels, and help to build workplace friendships across levels and departments.

Research reveals that intimate relationships at work (friendship, for instance) are important to creativity [11]. To demonstrate creativity, individuals must possess work motivation, professional knowledge and creative thinking ability. Workplace friendship can enhance these three factors. First, employees who have friends at work are more motivated and enthusiastic about their work. While work is stressful and physically exhausting, workplace friendships can make work more fun, satisfying, and challenging by allowing colleagues to look out for each other. Secondly, friendship promotes learning. Friendship at work makes employees willing to share information and knowledge [12], thereby enhancing professional knowledge and skills, which is essential to creating new intellectual capital and subsequently generating greater creativity [13]. Third, workplace friendship can enable employees to put down their concerns and defenses and fully express different opinions, and to be more modest and willing to accept opinions and comments from others. The relaxed atmosphere is beneficial to the communication and breakthrough of different viewpoints among employees, and the resulting diversified perspectives are the key to improving creativity [14].

Based on the above analysis, this study suggests that improving workplace fun, such as increasing social activities and festivals and adopting an open office, can create a pleasant working atmosphere and enhance overall happiness, thus promoting the formation of workplace friendship. Workplace friendship can promote deep communication and cooperation among employees and promote employee innovation. Therefore, this study proposes the following hypotheses:

H2: Workplace friendship plays a mediating role between workplace fun and employee creativity.

2.3. The Moderating Effect of Personality Types

Extroverts are usually warm, optimistic, confident and have strong social skills. Workplace fun usually includes diverse social activities and team activities, which is exactly the environment atmosphere that extroverts tend to have. In this way, more positive feedback can be output, which further enhances fun in the workplace, makes it easier to establish workplace friendships, increases the opportunities for employees to communicate, and enhances the collision of different ideas and thinking, thus promoting the improvement of employees' creativity. Introverts are relatively quiet, inactive, shy and conservative, and pay more attention to their own feelings, and have a low perception of the overall happy atmosphere of the team. They tend to avoid social interaction in the workplace because they are not sociable and are relatively solitary, and they may have an aversion and avoidance attitude towards social activities and celebrations in the workplace fun. Therefore, there may be less positive feedback, which will hinder the effect of workplace fun to a

certain extent, reduce the opportunities for employees to communicate, and will not be conducive to the improvement of employees' creativity. Therefore, this study proposes the following hypotheses:

H3: Personality types (introvert-extrovert) play a moderating role between workplace fun and employee creativity.

In conclusion, the research model of this study is established as follows (see Figure 1).

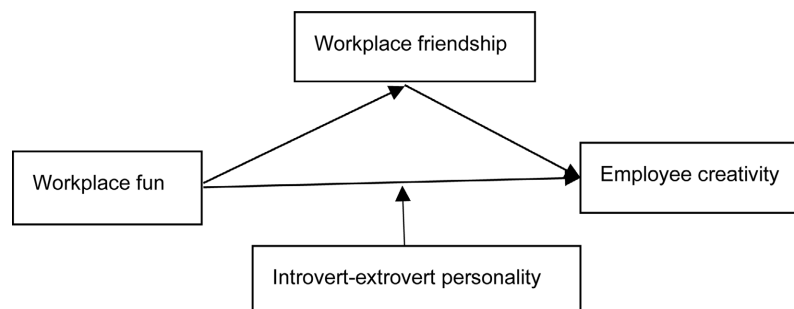


Figure 1. The research model.

3. Research Design

3.1. Research Method

In this study, maturity scales widely adopted by many scholars at home and abroad were selected, and 5-point Likert scale was adopted, with the scale from 1 to 5 indicating “completely inconsistent”, “relatively inconsistent”, “generally consistent”, “relatively consistent” and “completely consistent” respectively.

3.1.1. Workplace Fun

Based on Mcdowell (2004) [15], the total scale of workplace fun includes four dimensions: social activities, celebrations, individual freedom and overall happiness, including “I socialize a lot with my colleagues at work”, “I often joke around with my colleagues or share experiences with them” (Cronbach’s $\alpha = 0.968$).

3.1.2. Workplace Friendship

The measure was adapted from Sun, Yin, and Li (2015) [16], and includes 9 items, such as:

“In my unit, I have the opportunity to talk or chat informally with other people”, “I can work with my colleagues and solve problems together” and other items (Cronbach’s $\alpha = 0.897$).

3.1.3. Introvert/Extrovert Personality

The Eysenck Personality Summary Scale Chinese version (EPQ-RSC) was used to scale the introvert and extrovert personality, which sets 8 items, including “I like to have a lot of friends”, “I really like to talk to people” (Cronbach’s $\alpha = 0.632$).

3.1.4. Employee Creativity

The measure includes 7 items, such as “I often come up with some creative ideas

or ideas at work”, “I will promote my new views and ideas to other colleagues” (Cronbach’s $\alpha = 0.885$).

3.1.5. Control Variables

Control variables included gender, age, education, industry, nature of enterprise, position, etc.

3.2. Data Sources and Data Collection

Questionnaire survey was adopted in this study. In order to ensure the authenticity of the data and the confidentiality of the data of the research objects, this study adopted the way of anonymous filling. The number of offline surveys recovered was 87, and the number of online surveys recovered was 188. After deleting invalid questionnaires such as the same answers, lie test questions and short answers, 236 valid questionnaires were obtained, and the effective recovery rate was 85.82%.

Among the respondents we collected, male accounted for 40.7% and female accounted for 59.3%; in terms of age, 1.7% of the respondents were 20 years old or younger, 46.6% were 21 to 25 years old, 19.9% were 26 to 30 years old, 13.1% were 31 to 35 years old, 11.9% were 36 to 40 years old, and 6.8% were 41 years old or older; from the perspective of educational background, 23.3% of the respondents were junior college or below, 70.8% were undergraduate, and 5.9% were master’s degree or above; from the perspective of industry distribution, the industry distribution of the respondents is between 2% and 6%, among which the IT/hardware and software services/e-commerce/Internet operation industry accounted for a relatively high proportion, about 8.9%; in terms of the nature of enterprises, the respondents from state-owned enterprises accounted for 18.2%, foreign-funded enterprises accounted for 15.3%, private enterprises accounted for 48.7%, government agencies/institutions accounted for 15.3%, and other industries accounted for 2.5%; from the perspective of positions, 80.9% of the respondents were ordinary employees, 9.7% were grass-roots managers, 5.1% were middle managers, 2.5% were senior managers, and 1.7% are other positions.

3.3. Common Method Bias Test

The data of this study were collected from multiple sources and multiple time points to control homology bias and used Harman’s Common Method Bias Test to test. The results of unrotated factor analysis show that the first-factor variance explained amount accounted for 20.98% of all factors explained variance, and there is no obvious common method deviation. In addition, the Variance Inflation Factor (VIF) test result is 1.07, which is less than 2, indicating that there is no serious multicollinearity in the data.

4. Results

4.1. Descriptive Statistical Analysis and Correlation Analysis

Descriptive statistics and correlation analysis results are shown in **Table 1**.

Table 1. Descriptive statistics and correlation analysis results.

Variable	M	SD	1	2	3	4
1. Workplace fun	3.4104	0.8035	1.000			
2. Workplace friendship	3.8649	0.70048	0.419**	1.000		
3. Employee creativity	3.2728	0.55239	0.391**	0.459**	1.000	
4. Personality types	3.8729	0.76308	0.289**	0.409**	0.317**	1.000

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

According to **Table 1**, workplace fun is significantly positively correlated with workplace friendship ($r = 0.419$, $p < 0.01$) and employee creativity ($r = 0.391$, $p < 0.01$). Workplace friendship is positively correlated with employee creativity ($r = 0.459$, $p < 0.01$). The results lay the foundation for the follow-up regression analysis.

4.2. Hypothetical Test

4.2.1. Main and Mediating Effects of Workplace Fun

Table 2. Main effect and mediating effect tests.

Variables	Employee creativity Model 1		Workplace friendship Model 2		Employee creativity Model 3	
	B	t	B	t	B	t
Gender	-0.2096**	-3.6301	-0.1104	-1.841	-0.1746**	-3.1723
Age	0.0992	0.8447	-0.0019	-0.016	0.0998	0.898
Educational background	-0.0396	-0.6814	-0.0748	-1.2391	-0.0159	-0.2886
Work experience	0.1805	1.5588	0.1429	1.1879	0.1353	1.2305
Industry	0.0065	0.1153	-0.0786	-1.3353	0.0314	0.5833
Nature of enterprise	0.078	1.3739	-0.1298*	-2.2011	0.119*	2.1928
Position	0.000	-0.0008	-0.0522	-0.827	0.0165	0.286
Workplace fun	0.3904***	6.8189	0.3977***	6.6852	0.2646***	4.4628
Workplace friendship					0.3164***	5.2327
R ²	0.2941		0.2379		0.3891	
F	11.8209		8.86		14.771	

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

To test H1 - H3, IBM SPSS Statistics was used to analyze the data obtained from the questionnaire and the results of the test are presented in **Table 2**.

In Model 1, workplace fun has a significant positive effect on employee creativity ($B = 0.3904$, $p < 0.001$), indicating that workplace fun will increase employee creativity. Therefore, H1 is supported.

In Model 2, workplace fun has a significant positive effect on workplace friendship ($B = 0.3977$, $p < 0.001$); in Model 3, workplace fun and workplace friendship are entered into the regression equation together. Data show that workplace fun is significantly related to employees' creativity ($B = 0.2646$, $p < 0.001$), and workplace friendship is significantly related to employees' creativity ($B = 0.3164$, $p < 0.001$), indicating that workplace friendship plays a partial mediating role between workplace fun and employee creativity. Therefore, H2 is supported.

We adopted a bootstrap method to test the mediating effect using PROCESS macro, and the results are shown in **Table 3**.

Table 3. Mediating effect, direct effect, and total effect

Effect types	Effect	BootSE	BootLLCI	BootULCI	Effect ratio
The mediating effect	0.1195	0.0341	0.0621	0.1967	32.23%
Direct effect	0.2513	0.0651	0.1328	0.3856	67.77%
Total effect	0.3708	0.062	0.252	0.497	

As can be seen from **Table 3**, both the upper and lower limits of the bootstrap 95% confidence interval of the direct effect and the mediating effect do not include 0, indicating that workplace fun not only has a direct effect on employee creativity, but also can positively affect employee creativity through the mediating effect of workplace friendship. The direct effect (0.2513) and the mediating effect (0.1195) respectively account for 67.77% and 32.23% of the total effect (0.3708).

4.2.2. Moderating Effect

To avoid multicollinearity, the independent and moderating variables were standardized and centralized. The results of multiple hierarchical regression are shown in **Table 4**.

Table 4. The moderating effect.

Variables	Employee creativity		
	Model 1	Model 2	Model 3
Gender	-0.178***	-0.17***	-0.17***
Age	0.188**	0.081**	0.068**
Educational background	-0.065	-0.019	-0.015
Work experience	0.122	0.193	0.204
Industry	-0.047	0.011	0.021
Nature of enterprise	0.075	0.067	0.05
Position	-0.049	-0.007	0.01
Workplace fun		0.309***	0.298***
Personality type		0.279***	0.278***
Workplace fun * Personality type			-0.101*

Continued

R ²	0.149	0.363	0.372
Adjusted R ²	0.123	0.338	0.345
F	5.725***	14.323***	13.355***

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

According to **Table 4**, the cross-term of workplace fun and personality type is entered into the regression equation, and the coefficient is significant ($b = 0.101$, $p < 0.05$), indicating that introvert and extrovert personality plays a moderating role between workplace fun and employee creativity, and H3 was supported.

Figure 2 illustrates the moderating effect of Personality type. As can be seen from **Figure 2**, the introverted personality group has a positive and steeper slope than the extroversion, which means when employees are more introverted, the positive effect of workplace fun on employee creativity is stronger; when employees are more outgoing, the positive effect of workplace fun on employee creativity is weak. Therefore, the introvert and extrovert personality can moderate the relationship between workplace fun and employee creativity, which H3 is supported.

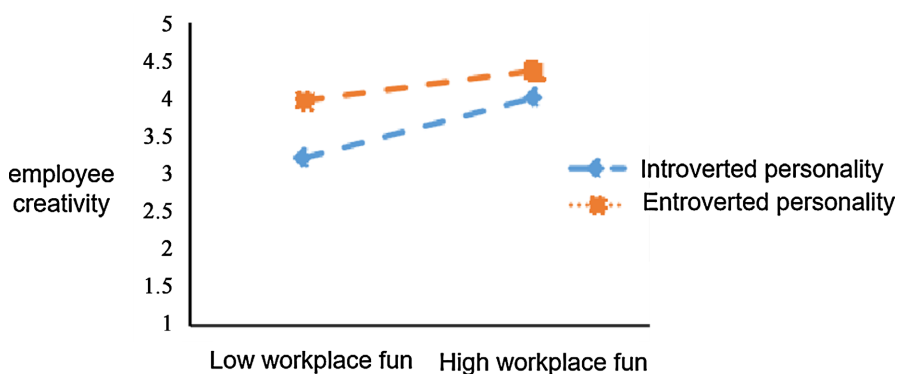


Figure 2. Moderating effect of personality type.

5. Conclusion and Discussions

5.1. Research Conclusion

As the post-80s and 90s enter the workplace and become the main force, research on workplace fun is starting to attract attention, but research that combines workplace fun with creativity is still limited. We extend this conversation with an empirical study. The results show that workplace fun significantly increases employee creativity and supports the mediating role of workplace friendship in it. The findings further suggest that introvert and extrovert personalities play a moderating role in workplace fun and employee creativity. Compared with extroverted employees, workplace fun has a stronger positive impact on the creativity of introverted employees. The effect of social activities is more reflected in introverted employees, probably because workplace social activities provide introverted employees with opportunities to contact the outside world and communicate with

other employees, which brings unprecedented experience to such passive employees.

5.2. Management Enlightenment and Suggestions

The new generation of employees, such as those born in the 80s, 90s and 00s, has become the backbone and emerging force of enterprise development, and these employees need not only economic returns, but also pay more attention to the satisfaction of spiritual needs. Therefore, it is necessary to adopt correct and effective ways to enhance the creativity of employees by enhancing workplace fun. Enterprises can take corresponding measures in the following aspects: 1) in terms of social activities, enterprises should build convenient and easy communication platforms and social environment to provide more social activities, and encourage different ranks, departments of friendly exchanges, create conditions and opportunities for the collision of ideas and the innovation of opinions, stimulate their creativity, eventually bring more development opportunities for the enterprise and practical benefits. 2) In terms of celebrations, the enterprise should attach importance to the special holiday and staff anniversary and hold a variety of fun activities, which creates a relaxed and happy working atmosphere, relieves employee work pressure, recovers employee energy, further improves the staff to carry out the possibility of innovation behavior and stimulates employee creativity. 3) In terms of individual freedom, enterprises should give employees some freedom of dress, behavior and work autonomy, so that employees can deepen their understanding of work to better combine individual goals with organizational goals and create more possibilities in work. 4) In terms of overall happiness, enterprises can design a humanized workplace, combine the working environment with life and entertainment, and create a happy and pleasant working atmosphere to make employees find the fun in work, so as to improve their work enthusiasm, which is more conducive to the development and cultivation of employees' creativity.

In addition, according to the mediating effect of workplace friendship on the workplace fun and employee creativity, enterprises can deepen and cultivate the workplace friendship between employees, so as to better promote the promotion of employee creativity. Healthy and happy workplace friendship is conducive to creating a positive working mood, improving working attitude, improving working enthusiasm, and acquiring and reorganizing resources, which are conducive to stimulating the creativity of employees.

Finally, introvert and extrovert personalities have a moderating effect on the relationship between workplace fun and employee creativity. For the introvert personality of employees, workplace fun can stimulate greater creativity. Managers can understand and investigate the needs of employees, create an effective and fun workplace, and focus on encouraging introverted employees to participate in more social activities, so that employees can develop more potential for innovation in interesting activities and environment.

5.3. Limitations and Extensions

First, the sample population of this study is relatively concentrated, which impacts the applicability of the results and recommendations of this study. For future research, the scope and number of samples can be expanded, and the universality and representativeness of the study can be improved. Second, the way to get the data is too limited, basic from employee self-report questionnaire and based on the analysis of firms' cross-sectional data, where the time lag has not been adequately addressed. Future research might consider including data from paired questionnaires and collecting longitudinal data of samples rather than the cross-sectional data. Thirdly, this study only explored the mediating effect of workplace friendship. In fact, variables such as employee cooperation, interpersonal trust, job prosperity, and knowledge sharing are likely to play a role in workplace fun, workplace friendship, and employee creativity. For future research, more mediating variables can be introduced to further improve the mechanism model of workplace fun on employee creativity.

Conflicts of Interest

The authors declare no conflicts of interest.

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