

Exploring the Influence on Military Staff's Cyberloafing to Work Performance from a Cross Level Perspective

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Abstract

In recent years, the rapid development of the information network has greatly influenced the lifestyle of human beings. Smartphones have broken the traditional communication mode and made information transfer more convenient and faster. However, for organizations, employees are likely to use their smartphones for non-work-related matters during working hours. According to the view of the conservation of resources theory, individuals will replenish or recover the sources of internal resources when large amounts of internal resources are depleted due to work. In the past study, some scholars thought that browsing websites for personal purposes in the work place may improve work efficiency. However, past research has rarely seen the use of this opinion to explore whether the behavior of cyberloafing is a way of seeking supplements or recovering internal resources when employees have a high degree of internal resource consumption during work. So, this study aims to discuss the daily cyberloafing of administrative staff in the ROC Armed Forces, understand whether this behavior influences their daily work performance, and whether the influence varies with different personal characteristics.

This study collects data through the daily diaries method and studies 95 soldiers for 8 working days by hierarchical regression, in order to discuss the influence of the constructs at the within-person level (cyberloafing and resources depletion recovery) and constructs at the between-person level (conscientious personality and internet addiction) on daily work performance. The findings are, as follows:

1. Cyberloafing has positive influence on daily work performance.
2. Cyberloafing has positive influence on resources depletion recovery.
3. Resources depletion recovery has positive influence on daily work performance.
4. Employees' conscientious personality has positive influence on their resources depletion recovery and daily work performance.

Keywords: Cyberloafing, internet addiction, work performance, conscientious personality

1. Introduction

Due to the rapid development of information networks, the mobile network has become a part of human life. According to the 2019 investigation report of the Taiwan Network Information Center (TWNIC), there are 18.06 million internet users over the age of 12 in Taiwan, with an overall internet access rate of 85.2%, of which 97.9% use smartphones as the main device, which shows that mobile internet has become the most commonly used networking method in Taiwan.

In such a rapidly advancing information age, in order to keep up with the developments of technology and attract young people to join the army, the Department of National Defense of the ROC allows Taiwanese military servicemen to bring their smartphones into barracks since 2019. However, in order to maintain military security, there are many restrictions on the use of smartphones in barracks, and they can enjoy the convenience brought by mobile internet providing they conform to the usage specifications. They are not prohibited

from using mobile internet in their spare time after work.

Most studies on cyberloafing examined schools or business organizations (Yildiz and Saritepeci, 2019; Andel et al., 2019; Pindek et al., 2018), but not the influence of cyberloafing on employees in closed military organizations. Hence, taking the administrative staff of the ROC Armed Forces as the subjects, this study collects data by the experience sampling method and diary study method from a cross-level perspective at the between-person level (personal characteristics) and the within-person level (influence of daily cyberloafing on work performance). This method helps to measure and verify the dynamic changes in work performance and daily emotion due to the cyberloafing of people in organizations, in order to clarify whether the daily cyberloafing activities of the administrative staff of the ROC Armed Forces influences their daily work performance and whether such influence varies with different personal characteristics.

Based on the above motivations, the purposes of this study are, as follows:

1. To explore whether the cyberloafing of the administrative staff of the ROC Armed Forces influences their daily work performance.
2. To explore whether cyberloafing can help to recover from negative experiences at work and whether resources depletion recovery influences daily work performance.
3. Whether the influence of cyberloafing on work performance varies with internet addiction from a cross-level perspective.
4. Whether a conscientious personality has a cross-level influence on resources depletion recovery and daily work performance.

2. Literature Review

2.1 Cyberloafing

Cyberloafing consists of 2 parts: loafing comes from loafer, meaning that a person wastes his or her time; and cyber is used as a prefix based on computer technology. Hence, cyberloafing means that a person wastes his or her time to conduct activities related to computers or the internet. Some recent scholars have defined cyberloafing as internet abuse, that is, employees spontaneously use corporate networks at work for personal purposes to browse non-work-related websites and to view personal correspondences (Blau et al., 2006); or individuals use the networks provided in some spaces to kill time or handle personal affairs (Gregory, 2011). Ma (2013) argued that cyberloafing refers to the deliberate actions of employees surfing the internet via products of information and communications technology during working hours for personal purposes, to browse non-work-related information, interact with others, and deal with email.

Cyberloafing is often considered as a counter-productive work behavior, which is not good for or even harmful to organizational productivity (Spector et al., 2006). However, some scholars have argued that cyberloafing can relieve pressure and help employees recover from negative experiences at work, such as work pressure and exhaustion (Anandarajan and Simmers, 2005; Stanton, 2002; Oravec, 2002, 2004).

2.2 Resources Depletion Recovery

According to the view of the conservation of resources theory (Hobfoll, 1989), people will preserve, protect, and cultivate the resources they value, and will suffer from psychological discomforts when (1) resources are under threat of loss; (2) resources are actually lost; and (3) returns cannot be obtained after resource investment. The resources herein include object resources, conditions, personal characteristics, and energies. According to the conservation of resources theory, the accumulation of resources comes from the re-acquisition of resources after the input of resources. The

resources invested by individuals in work will enable them to obtain other resources, and the newly acquired resources may also be put into work again. In order to maintain internal resources at a certain level and cause no resources depletion, individuals will replenish or recover the sources of internal resources when large amounts of internal resources are depleted due to work (Wu and Cheng, 2006).

Hence, this study believes that cyberloafing may be a way for employees to replenish or recover internal resources in the case of high resources depletion at work. According to Lim and Chen (2012), browsing the web for personal purposes instead of working may improve work efficiency, and some web browsing behaviors can help employees relieve work pressure and improve work performance. Therefore, this research is looking forward to discussing how the behavior of cyberloafing can help employees recover from negative experiences at work, and the relationship between resource depletion recovery and work performance on the day from the viewpoint that Internet hanging out can relieve stress.

2.3 Internet Addiction

Internet addiction generally refers to disordered schedules resulting from the excessive use of computers (Block, 2008; Lopez-Fernandez et al., 2013). Kimberly and Young provided a definition of internet addiction in a 1996 American Psychiatric Association (APA) publication, including: (a) non-essential and compulsive use; (b) loss of interest in activities or interpersonal interaction; (c) people's lives dominated by real-time online activities; (d) failure to control use.

In Taiwan, most previous studies on internet usage mainly focused on students. Taking the administrative staff of the ROC Armed Forces as the subjects, this study conducts measurement with the Chen Internet Addiction Scale (CIAS), as developed by Chen et al. (2003). According to this scale, the trend of the internet addiction scale is personal characteristics. This study attempts to explore whether daily cyberloafing influences the relationship between resources depletion recovery and work performance due to internet addiction and uncontrollable online behaviors.

2.4 Conscientious Personality

In this study, the observed personality traits are recorded, and then, the structure of the Big Five personality traits is formed according to factor analysis. Norman (1963) summarized five personality factors according to personality dimensions. Since the 1980s, scholars have explored personality traits according to the Big Five personality traits (Costa and McCrae, 1992), which is the most widely accepted classification method by far.

Among the Big Five personality traits, the connotations of a conscientious personality are taken as the individual reliability level. People with

this personality trait are responsible, organized, reliable, and consistent, and behave in a way that demonstrates hard work, achievement orientation, pursuit of excellence, and conformity (Hogan and Ones, 1997). A conscientious personality reflects an individual's motivation and the ability of self-regulation (McCrae and Löckenhoff, 2010). According to literature, conscientiousness is the trait most closely related to work performance (Barrick et. al., 2001), and refers to the degree to which a person focuses on his or her goals, and highly conscientious people are hard-working, achievement-oriented, perseverant, consistent, responsible, punctual, organized, ambitious, and careful (Hogan & Ones, 1997). Conscientiousness is the ability to be organized, serious, and responsible (Barrick and Mount, 1991), and its degree will be reflected in the difference of personal self-regulation (Tangney et. al., 2004). Highly conscientious people are reliable, disciplined, and focused on tasks, and have great motivation and internal resources to finish their work (Salgado, 2002; Shiner et. al., 2002).

3. Study Method and Framework

3.1 Hypotheses Development and Research Framework

3.1.1 Influence of "cyberloafing" on "daily work performance"

Some scholars have argued that cyberloafing has no negative influence on employees' work performance (Mercado et. al., 2017; Pindek et. al., 2018); while other researchers found that cyberloafing may positively influence employees, such as improving their emotions (Lim and Chen, 2012) and enabling employees to be more dedicated to their work (Syrek et. al., 2017). The experiments of Chen and Lim (2011) found that subjects will have a low degree of psychological fatigue and boredom after cyberloafing, and thus, will have high work efficiency. Hence, this study argues that the administrative staff of the ROC Armed Forces in closed military zones can be more productive at work if they comply with regulations and take short breaks for cyberloafing on their smartphones in their spare time.

H1: Employees' "cyberloafing" has positive influence on their "daily work performance".

3.1.2 Influence of "cyberloafing" on "resources depletion recovery"

According to the view of the conservation of resources theory, cyberloafing can be used as a way to recover cognitive resources. Lim and Chen (2012) found that cyberloafing has positive influence on employees' fatigue recovery, and also pointed out that engaging in short tasks unrelated to work may have positive influence on employees, including reducing fatigue and pressure, increasing

work satisfaction and creativity, and facilitating physical and psychological recovery (Vitak et. al., 2011). Baturay and Toker (2015) also found the positive effect of cyberloafing in their study, namely, the reduction of employees' pressure.

Hence, cyberloafing can be used as a way to recover cognitive resources: if employees can easily browse non-work-related websites when they are tired at work, it can help them to take a break (Wagner et. al., 2012). Therefore, web browsing has positive influence on cognitive resource recovery, and web browsing at work often makes employees feel good and forget their work for a little while (Simmers et. al., 2008).

This study finds that the administrative staff of the ROC Armed Forces may recover from negative emotions at work if they use their smartphones for cyberloafing in their spare time. Hence, the following hypothesis is put forward:

H2: Employees' "cyberloafing" has positive influence on their "resources depletion recovery".

3.1.3 Influence of "resources depletion recovery" on "daily work performance"

Baturay and Toker (2015) argued that the positive effect of cyberloafing is to reduce employees' pressure and they can improve work performance after recharging. Hence, cyberloafing can help employees to recover cognitive resources by alleviating the pressure on employees and motivating them to perform better.

Therefore, this study argues that the administrative staff of the ROC Armed Forces will be more productive at work after recovering from negative emotions at work by cyberloafing in their spare time. Hence, the following hypothesis is put forward:

H3: Employees' "resources depletion recovery" has positive influence on their "daily work performance".

3.1.4 Regulating the effects of "internet addiction" on "cyberloafing", "resources depletion recovery", and "daily work performance"

As a psychological dependence on the internet, internet addiction refers to an addictive behavior that users are excessively addicted to the internet. According to recent studies, the use of smartphones may lead to addiction and influence users' health (Chóliz, 2012; Leung, 2008). As one of the technology addictions, smartphone addiction can cause people to become lost and unable to extricate themselves (Lopez-Fernandez et. al., 2018), in other words, they devote more cognitive resources to non-work-related information, and they are less likely to shift their attention back to work, resulting in low work performance. In addition, when employees are addicted to the internet, the effect of rest and relaxation cannot be achieved. Hence, the following hypotheses are put forward in this study:

H4: Employees’ “internet addiction” negatively regulates their “cyberloafing” and “resources depletion recovery”.

H5: Employees’ “internet addiction” negatively regulates their “cyberloafing” and “daily work performance”.

3.1.5 Influence of “conscientious personality” on “resources depletion recovery” and “daily work performance”

Conscientiousness is the ability to be organized, serious, and responsible (Barrick and Mount, 1991), and its degree will be reflected in the difference of personal self-regulation (Tangney et. al., 2004). According to literature, conscientiousness is the trait most closely related to work performance (Barrick et. al., 2001). Conscientiousness refers to the degree to which a person focuses on his or her goals, and highly conscientious people are hard-working, achievement-oriented, perseverant, consistent, responsible, punctual, organized, ambitious, and careful (Hogan & Ones, 1997). In addition, conscientiousness is the ability to be organized, serious, and responsible (Barrick and Mount, 1991). Highly conscientious people are less likely to be distracted at work, more highly motivated to finish their work, less likely to procrastinate when pursuing goals, and more likely to achieve good

performance by using the skills of time management and effort regulation (Bidjerano and Dai, 2007). Due to the task-oriented occupational characteristics of soldiers, regarding the employees with a conscientious personality, their high achievement-orientated and self-regulating abilities will enable them to achieve good work performance and recover from negative work experience. Hence, the following hypotheses are put forward in this study:

H6: Employees’ “conscientious personality” is positively related to their “resources depletion recovery”.

H7: Employees’ “conscientious personality” is positively related to their “daily work performance”.

3.1.6 Chapter Summary

The purposes of this study are mainly to explore the influence of cyberloafing on daily work performance, to investigate its influence on work performance from the perspective of resources depletion recovery and conscientious personality at the between-person level, and to understand whether internet addiction at the between-person level regulates cyberloafing. The research framework is shown in Figure 1.

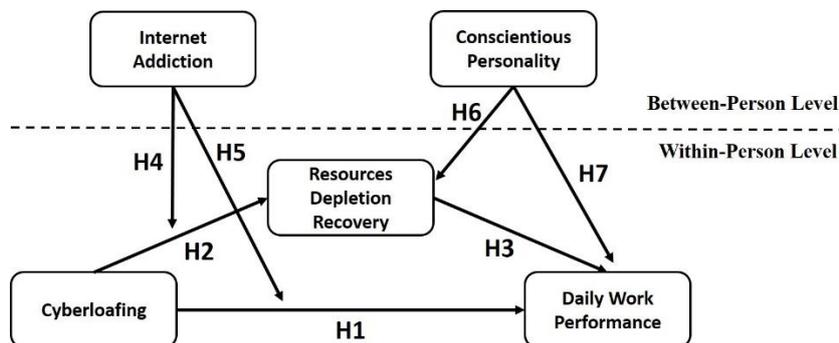


Figure 1: Research Framework

3.2 Definitions and Operations of Research Variables

This research framework consists of five dimensions: cyberloafing, conscientious personality, work performance, internet addiction, and resources depletion recovery. Hence, this study invited 30 people for the pre-test to understand the participants’ understanding of the items and adjust the items according to the results. The definitions of the variables in all dimensions of the formal questionnaire in this study, as well as the item operations in the scale, are described below.

3.2.1 Cyberloafing

According to the view of Ma (2013), this study defines cyberloafing as: “the deliberate actions of employees surfing the internet via the products of information and communications

technology during working hours for personal purposes, to browse non-work-related information, interact with others, and deal with email”. The cyberloafing scale applied in this study is modified from the scale developed by Lim and Chen (2012). In this study, cyberloafing is measured according to internet-related deliberate actions during working hours, such as non-work-related browsing and interaction, and the daily work performance is measured by daily work quality and task completion standards.

3.2.2 Conscientious personality

According to the view of Hogan and Ones (1997), this study defines conscientiousness as being responsible, organized, reliable, and consistent, and behaving in a manner that demonstrates hard work, achievement orientation, and the pursuit of excellence and conformity, which are measured

according to the personality trait scale of Goldberg (1999).

3.2.3 Work performance

Campbell (1990) defined work performance as the behavior performed by an individual as an organization member to meet the organization's expected, prescribed, or formalized role requirements, or the work behavior of an employee during a specific period. By using the task performance scale of Wayne and Liden (1995), this study selects five items that fit the research situation to measure the efficiency and quality of daily work performance.

3.2.4 Internet addiction

Internet addiction is the non-essential, compulsive use of the internet that results in a loss of interest in other activities or interpersonal interactions. Real-time online activities have now occupied most people's lives, and some users may become internet addicts if they cannot control their usage. Hence, this study measured the participants' internet addiction tendency with the "Chen Internet Addiction Scale", as developed by Chen et al. (2003), which is scored according to a five-point Likert scale.

3.2.5 Resources depletion recovery

This study defines resources depletion recovery, as follows: an individual will replenish or recover the sources of internal resources when a large amount of internal resources are depleted due to work, in order to maintain internal resources at a certain level and cause no resources depletion. In this study, the scales of the work-related effects of Bono, Foldes, Vinson, and Muros (2007) are used to measure initial emotions and subsequent resources depletion, and a five-point Likert scale is used to score the measurements made before and after work.

3.3 Research Design

This study collected data by diary study, tested the causal relationship among the constructs, and tried to find a reasonable explanation. Therefore, this study focused on the field of management application, and verified the research framework and hypotheses by the quantitative research method.

3.3.1 Questionnaire design

According to literature, the constructs were revised into a formal questionnaire after pre-testing by referring to previous research scales, including 3 parts, basic personal data, items (internet addiction and conscientious personality) at the between-person level, and items (cyberloafing, resources depletion recovery, and work performance) at the within-person level. A five-point Likert scale was used for measurement, and participants answered

the questions based on their personal opinions or actual feelings.

3.3.2 Research subject and sample collection method

The research sample comes from Taiwan's military administrative units that the staff can return home after get off work. Such as the administrative units of the Ministry of National Defense, military school, or weapon factory. The subjects of this study were investigated by the Experience Sampling Method, meaning people's real-time assessments of their life events in a short period were collected many times and recorded. Repeated sampling was used to collect information that was susceptible to time and individual factors. This study collected data from 95 employees over a period of 2 weeks, namely, 8 working days (4 times a week, Monday to Thursday). In the first measurement, the questionnaire was used to understand the basic personal data of all participants and measure the constructs (internet addiction and conscientious personality) at the between-person level. Then, the constructs (cyberloafing, resources depletion recovery, and work performance) at the within-person level were measured for the 8 working days. The resources depletion recovery data were measured before and after work to understand the emotion recovery from work.

3.3.3 Data processing and analysis method

This study used statistical analysis software SPSS 20 and HLM 7 for encoding the questionnaires, analyzing, and processing the sample data, and deleting invalid questionnaires. Then, descriptive statistics, correlation analysis, and reliability and validity analysis were conducted. Finally, the cross-level hypotheses in this research framework and the causal relationships among the constructs at the within-person level were verified by the hierarchical linear model and simple linear regression analysis.

4. Data Analysis and Results

4.1 Descriptive Statistical Analysis of Samples

The investigation period was from November 2019 to January 2020, and the administrative staff of the ROC Armed Forces who could surf the internet during working hours were selected as the subjects. Questionnaires were issued to a total of 95 participants for 8 working days, and a total of 789 questionnaires were collected, among which 706 were valid. The statistical results of the sample data were consistent with the state of the administrative department of the ROC Armed Forces. The main employees were male officers, and most of them had university degrees and served as administrative staff. The sample data are shown in Table 1.

Table 1: Statistics of Sample Characteristics

Variables	Category	Number of people	Percentage (%)
Gender	Male	68	71.58%
	Female	27	28.42%
Marital status	Single	44	46.32%
	Married	51	53.68%
Age	Under 20 years old	3	3.16%
	21-30 years old	23	24.21%
	31-40 years old	54	56.84%
	41-50 years old	13	13.69%
	Over 50 years old	2	2.10%
Education background	Senior high school (higher vocational school)	3	3.16%
	Junior college	12	12.63%
	universities and colleges	69	72.63%
	Graduate school or above	11	11.58%
Years of current employment	Less than 1 year	4	4.21%
	1-3 years	32	33.69%
	3-5 years	27	28.42%
	5-7 years	15	15.79%
	More than 7 years	17	17.89%
Working years	1-3 year	3	3.16%
	4-8 years	22	23.15%
	9-15 years	52	54.74%
	16-20 years	14	14.74%
	More than 20 years	4	4.21%
Rank	Officer	61	64.21%
	Non-commissioned officer	26	27.37%
	Soldier	3	3.16%
	Contractor	5	5.26%
Type of work	Staff	56	58.95%
	Leader	27	28.42%
	Others	12	12.63%
Pay	NTD 30000-50000	27	28.42%
	NTD 50000-70000	58	61.05%
	More than NTD 70000	10	10.53%

Source: Compiled by this study

4.2 Reliability and Validity Test of the Questionnaire Scale

In this study, factor loading, Cronbach's α , composite reliability (CR), and average variance extracted (AVE) were used for measurement in the reliability test, and discriminant validity and convergent validity were used for measurement in the validity test.

4.2.1 Factor loading test

By referring to the suggestions of Anderson and Gerbing (1988), this study conducted factor loading testing and confirmatory factor analysis. According to the convergent validity evaluation criteria of Fornell and Larcker (1981), the measured item reaches an acceptable convergence validity if all standard factor loadings are greater than 0.5. There are 23 items in the formal questionnaire scale, and the factor loadings of all items are greater than 0.5, as shown in Table 3.

Table 3: Factor Loading Test Results

Construct	Question	AVE of factor loadings	Result
Cyberloafing CB	CB1	0.72	Passed
	CB2	0.68	Passed
	CB3	0.82	Passed
	CB4	0.76	Passed
	CB5	0.88	Passed
	CB6	0.80	Passed
Work performance WP	WP1	0.77	Passed
	WP2	0.89	Passed
	WP3	0.71	Passed
	WP4	0.81	Passed
Internet addiction IA	IA1	0.70	Passed
	IA2	0.69	Passed
	IA3	0.86	Passed
	IA4	0.75	Passed
	IA5	0.87	Passed
Conscientious personality CS	CS1	0.78	Passed
	CS2	0.72	Passed
	CS3	0.81	Passed
	CS4	0.85	Passed
	CS5	0.71	Passed
	CS6	0.65	Passed
	CS7	0.74	Passed
	CS8	0.66	Passed

Source: Compiled by this study

4.2.2 Reliability test

Cronbach's α and CR were used for reliability testing, with the judgment criteria of Cronbach's $\alpha > 0.7$ (Straub et al., 2004; Nunnally, 1967) and CR > 0.7 (Homburg and Giering, 1996). According to testing, the Cronbach's α and CR of all constructs are above 0.7 and meet the judgment criteria, proving that the constructs and items in this study have good reliability. The reliability test results are shown in Table 4.

Table 4: Reliability Test Results

Construct	Cronbach's α	CR	Result
Cyberloafing CB	0.70	0.92	Passed
Conscientious personality CS	0.91	0.91	Passed
Work performance WP	0.76	0.87	Passed
Internet addiction IA	0.71	0.84	Passed

Source: Compiled by this study

4.2.3 Validity test

According to the suggestions of Anderson and Gerbing (1991), the fit between model constructs and theories is measured through construction validity. The construct validity can be achieved only when both convergent validity and discriminant validity reach the test level. In this study, the average variance extracted and factor loading were measured, and the factor loading prove that all variables meet the judgment criteria (factor loading > 0.5). The AVE of all constructs is between 0.52 and 0.67, proving that this study has good and sufficient convergent validity. The test results are shown in Table 5.

Table 5: Convergent Validity Test Results

Construct	Average variance extracted (AVE)	Result
Cyberloafing CB	0.67	Passed
Conscientious personality CS	0.60	Passed
Work performance WP	0.63	Passed
Internet addiction IA	0.52	Passed

Source: Compiled by this study

According to Table 6, the square roots (diagonal values, marked with bold font and grey shade) of the average variance extracted from the constructs are greater than the correlation coefficients (off-diagonal values in horizontal and vertical directions) of the constructs, which proves that there is sufficient discriminant validity among the constructs. In conclusion, the questionnaire scale

designed in this study has sufficient convergent validity and discrimination.

Table 6: Discriminant Validity Test Results

	CB	CS	WP	IA
Cyberloafing CB	0.819			
Conscientious personality CS	0.5	0.775		
Work performance WP	0.22	0.16	0.794	
Internet addiction IA	0.12	0.07	-0.35	0.721

Note: the diagonal value is the square root of the average variance extracted, and other off-diagonal values are correlation coefficients of all dimensions

Source: Compiled by this study

4.3 Hypothesis Test

Based on the cross-level design, the purposes of this study were to explore whether the daily cyberloafing and resources depletion recovery at the within-person level and the conscientious personality at the between-person level influence the work performance at the within-person level, and to discuss whether the internet addiction at the between-person level interferes with the relationship between daily cyberloafing and work performance at the within-person level.

In addition, this study tested whether daily cyberloafing at the within-person level and the conscientious personality at the between-person level influence the resources depletion recovery at the within-person level, and whether internet addiction at the between-person level interferes with the relationship between daily cyberloafing and resources depletion recovery at the within-person level.

Hence, before testing the hypotheses, this study conducted one-way ANOVA on employees' daily cyberloafing to understand whether there were significant variations in the resources depletion recovery and daily work performance of employees. According to the one-way ANOVA results, the ICC (1) results of daily cyberloafing, resources depletion recovery, and daily work performance are 0.52 ($F = 17.92, p < 0.01$), 0.22 ($F = 11.81, p < 0.01$) and 0.46 ($F = 8.23, p < 0.01$), respectively. An ICC (1) greater than 0.138 indicates highly interclass correlation and an ICC (1) greater than 0.059 indicates that multilevel analysis should be considered (Cohen, 1988). In this paper, the ICC (1) of constructs at the within-person level is greater than 0.22, indicating that the daily cyberloafing, resources depletion recovery, and work performance do vary significantly among different employees. Hence, it is suitable to use a multilevel model for analysis and subsequent hypotheses testing.

This study used hierarchical linear model analysis for hypothesis testing, and take gender and working years as control variables. Then to

examine the antecedents and moderation effects of work performance. According to Table 7, Mode 1 discusses the influence of cyberloafing and resources depletion recovery at the within-person level (Level-1) on work performance. While Mode 2 adds the cross-level effects of a conscientious personality at the between-person level on work performance and the cross-level interference effects of internet addiction on cyberloafing and work performance.

According to Mode 1, employees' cyberloafing can positively predict its relationship with their

work performance ($\gamma = 0.30$; $p < 0.01$), and employees' resources depletion recovery can also positively predict its relationship with their work performance ($\gamma = 0.34$; $p < 0.01$). In Mode 2, a persons' conscientious personality positively influences their daily work performance ($\gamma = 0.40$; $p < 0.01$), and employees' internet addiction does not interfere with the relationship between their cyberloafing and work performance ($\gamma = -0.11$; $p > 0.10$). Hence, H7, H1, and H3 are supported, while H5 is not supported.

Table 7: Results of Hierarchical Linear Model Analysis on Cyberloafing and Work Performance

Independent variables	Work performance (dependent variables)	
	Mode 1	Mode 2
Level-1 (within-person level)		
Intercept term	0.84**	0.83**
Cyberloafing	0.30**	0.30**
Resources depletion recovery	0.34**	0.34**
Level-2 (between-person level)		
Gender	-0.05	-0.01
Working Years	0.00	0.00
Internet addiction	-0.01	-0.01
Conscientious personality	0.40**	0.36**
Cross-level interaction effect		
Cyberloafing * Internet addiction		-0.11

Note 1: + $p < 0.1$; * $p < 0.05$; ** $p < 0.01$.

Note 2: all independent variables at Level 1 were processed by Group-Mean Centering

Source: Compiled by this study

The antecedents and regulating effects of resources depletion recovery at the within-person level are shown in Table 8. According to Mode 1, employees' cyberloafing at the within-person level can positively predict its relationship with their resources depletion recovery ($\gamma = 0.04$; $p < 0.01$). In Mode 2, the conscientious personality at the between-person level positively influences the

resources depletion recovery at the within-person level ($\gamma = 0.26$; $p < 0.01$), and employees' internet addiction does not interfere with the relationship between their cyberloafing and resources depletion recovery ($\gamma = -0.15$; $p > 0.10$). Hence, H6 and H2 are supported, while H4 is not supported. The detailed hypotheses test results are shown in Table 9.

Table 8: Results of Hierarchical Linear Model Analysis on Cyberloafing and Resources Depletion Recovery

Independent variables	Resources depletion recovery (dependent variables)	
	Mode 1	Mode 2
Level-1 (within-person level)		
Intercept term	0.24**	0.26**
Cyberloafing	0.04**	0.30**
Level-2 (between-person level)		
Gender	-0.08	-0.10
Working Years	0.00	0.00
Internet addiction	-0.04	-0.04
Conscientious personality	0.26**	0.24**
Cross-level interaction effect		
Cyberloafing * Internet addiction		-0.15

Note 1: + $p < 0.1$; * $p < 0.05$; ** $p < 0.01$.

Note 2: all independent variables at Level 1 were processed by Group-Mean Centering

Source: Compiled by this study

Table 9: Hypotheses Analysis Results of this Study

Hypotheses	Results
H1: Employees' "cyberloafing" has a positive relationship with their "daily work performance".	Valid
H2: Employees' "cyberloafing" has a positive relationship with their "daily work performance".	Valid
H3: Employees' "resources depletion recovery" has a positive relationship with their "daily work performance".	Valid

Hypotheses	Results
H4: Employees' "Internet addiction" negatively regulates their "cyberloafing" and "resources depletion recovery".	Invalid
H5: Employees' "Internet addiction" negatively regulates their "cyberloafing" and "daily work performance".	Invalid
H6: Employees' "conscientious personality" has a positive relationship with their "resources depletion recovery".	Valid
H7: Employees' "conscientious personality" has a positive relationship with their "daily work performance".	Valid

Source: Compiled by this study

5. Results and Suggestions

According to the view of the conservation of resources theory, this study attempts to explore whether the administrative staff of the ROC Armed Forces can recover from negative experiences at work by using their smartphones for cyberloafing in their spare time, and whether their daily work performance is influenced, and attempts to discuss "internet addiction" and "conscientious personality" as the antecedents and regulating variables at the between-person level, in order to make suggestions based on the results and provide them as reference for the Department of National Defense.

5.1 Main Findings

1. Employees' cyberloafing has a significantly positive relationship with their daily work performance. Hence, if employees can replenish their cognitive resources by proper use of cyberloafing or obtain the necessary assistance through their interpersonal connections in network communities, cyberloafing is helpful to organizations.
2. Employees' cyberloafing has a significantly positive relationship with their resources depletion recovery, and employees' resources depletion recovery has a significantly positive relationship with their work performance. Hence, employees may recover from the negative emotions at work if they can make proper use of cyberloafing. Moreover, resources depletion recovery can help to improve work efficiency and quality.
3. Conscientious personality has a significantly positive relationship with daily work performance and positive influence on resources depletion recovery. Internet addiction does not interfere with the relationship between cyberloafing and work performance or the relationship between cyberloafing and resources depletion recovery.

While the main causal relationships are verified as expected in this study, the regulating effect of internet addiction is not consistent with the expectation, which is perhaps because most of the respondents are experienced staff officers who bear heavy tasks assigned by superiors and are under high pressure, meaning that they are unable to indulge in the internet during working hours, leading

to an insignificant regulating effect of internet addiction.

5.2 Management Suggestions

1. It is suggested that organizations can provide comfortable environments for employees' cyberloafing at a fixed time, in order that they can take short breaks in a comfortable environment, which can promote organizational cohesion in addition to relaxing and recovering cognitive resources, thus, improving work efficiency and inspiring creativity.
2. Employees' conscientious personality has a directly positive relationship with their daily work performance. By preliminarily screening whether candidates have the required personality traits, organizations can recruit and select talents by personality trait tests, in order to reduce the probability of recruiting inappropriate employees.

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