

The Effects of Workgroup Negative Functions on Work Well-being during the COVID-19 Outbreak

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ABSTRACT

According to the Centers for Disease Control and Prevention (CDCP), limiting face-to-face interaction is one of the best strategies for reducing the spread of COVID-19. The ongoing COVID-19 pandemic has driven the demand for workgroup application solutions to reduce the risk of cross-infection caused by close contact. This study explores the effects of workgroup negative functions (WNF) on work well-being (WWB) through job stress (JST) from the perspective of the mobile community. The data of participants from different workgroups were collected during the COVID-19 outbreak. The results showed that (1) the workgroup negative functions (WNF) positively affects the job stress (JST); (2) the job stress (JST) negatively affects the work well-being (WWB); (3) the workgroup negative functions (WNF) directly has no significant effects on the work well-being (WWB).

Keywords: Mobile Community, Workgroup Application, Well-being, Job Stress, COVID-19.

1. Introduction

The outbreak of Coronavirus disease (COVID-19) not only has a serious impact on society and the economy but also greatly affects everyone's lifestyle (Haleem, Javaid & Vaishya, 2020). When the COVID-19 pandemic ranges around the world, governments have taken a series of measures such as wear masks when going out, maintain social distancing, stay at home, quarantine at home, and even lock down the city. According to the Centers for Disease Control and Prevention (CDCP), limiting face-to-face interaction is the best strategy for reducing the spread of COVID-19. Therefore, workgroup communities bring people convenient to interact, entertainment, and media richness.

However, in situations with two sides, workgroup applications have been successfully used to manage chronic diseases (Triantafyllidis et al., 2019). The ongoing COVID-19 pandemic has driven the demands for solutions of workgroup applications to reduce the risk of cross-infection caused by close contact (McGinty et al., 2020). Workgroup applications are easy to access, acceptable, easy to adopt, and can support social distancing efforts. Market Intelligence & Consulting Institute (MIC) conducted a survey and analyzed app users' behavior of Taiwanese people. The top five types were communications (77.9%), games (64%), online shopping (46.2%), transportation (40.7%), photos and videos (40%) (MIC, 2017). Workgroup community platforms (such as LINE, WeChat, WhatsApp, BAND, and so on) contain mobile, cross-

platform, free messaging, free video, voice calls, cute stickers, and continuous innovation in functions are better than messaging tools on the computer.

On the other hand, although workgroup communities provide real-time interaction between members, the stress from workgroup members caused by immersion and interaction affects their work well-being (WWB) (Roberts & David, 2016). In addition, this paper explores the effects of workgroup negative functions (WNF) on work well-being (WWB) through the job stress (JST) from the perspective of work groups' members. With the rapid changes of workgroup technology, a smartphone equipped with a workgroup network has become a popular trend (Ahn & Shin, 2013). However, such behavior also brings many negative effects to people especially for office workers who work in the workplace.

In recent years, negative news related to the workgroup communities has happened frequently. 1111 human power bank (<https://www.1111.com.tw/>) released the survey and found that 74% of office workers have a workgroup community for work and 55% were forced to nod their heads to join the workgroup communities with their supervisors. The past studies pointed out that strong high-frequency radiation can be generated near the transmitting antenna on the top of the workgroup phone (Demircioglu, 2018). When a person's head is exposed to such strong high-frequency radiation, the human brain nerves and blood flow will change directions, which may cause humans brain damage. New York



psychiatrist mentioned that some children have been immersed in virtual communities all day since they had smartphones and social media accounts. They are disconnected from the real world, unwilling to interact with people in reality, and suffer from social phobia (Bian & Leung, 2015). Although workgroup community brings real interaction between people, the stress of immersion and interaction on workgroup members and their WWB is worth considering and discussing.

Vanhala & Tuomi (2006) pointed out that the concept of work well-being (WWB) originates from psychological well-being which including emotional well-being, work satisfaction, and emotional burnout. Warr (1987) revealed that employee's psychological health in the workplace can be regarded as WWB as subject well-being, job satisfaction, and lower work depression reaction. Overall, job satisfaction and positive emotion can be mixed as the structure of hedonism. This also means that the criteria for individual judgment, satisfaction evaluation, and positive emotions in working processes are determined by whether people can feel the sense of competence for work or realize one's potential. Currently, there is no unified definition and scale for research on WWB and past studies were designed and defined by scholars based on their own research goals and frameworks (Warr, 1987) pointed out that WWB is the overall evaluation of employees' work experience and work competence. This research focused on the effects of WNF on WWB, which is closely related to WWB. Therefore, Warr's (1987) definition was adopted in this study and reflected by three dimensions of job satisfaction (JBS), job enthusiasm (JBE), and job burnout (JBB).

The impact of communication transformed is one of the stress that the public will face shortly especially during Covid-19. Recently, news related to the use of mobile community by supervisors assign to get off work may cause excessive pressure. The mobile community has frequently been utilized among people. The functions, such as sending messages, video, and voice, emoticons, photos, videos, and games make the connection between members closer. However, in situations with two sides, this new interactive mode allows members to fall into a state of flow experience or psychic entropy (Mirvis, 1991; Dhir et al., 2020). Regardless of technology advancement, the workgroup community brings members convenient interaction, entertainment, and media richness, but things are always two sides. This study intended to explore the effects of workgroup negative functions (WNF) on the work well-being (WWB) deprivation of workgroup members from a negative point of view as well as job stress (JST).

2. Literature Review

The interactive and convenient operation of the workgroup community has replaced the traditional contact mode and become a shortcut for the public to interact and communicate. However, WNF has also brought many effects to workgroup members. Based on flow experience theory, this research re-constructed the workgroup negative functions (WNF) and realized JST and WWB perception of workgroup

members. Finally, through empirical research, the cause-and-effect relationships between WNF, JST, and WWB were explored.

2.1 Workgroup Negative Functions (WNF)

When the mobile community is commonly used in life, the symptoms began to spread; for instance, anxiety reaction for leave someone on reading, cognition gap caused by indirect dialogue, communication barriers, and so on. Under the circumstance of the Internet, there is often invisible anxiety reaction about communication fatigues. In the past, when people communicate with friends, they can also make appointments. However, on the Internet, anyone can add you into a workgroup community at any time. Regardless of whether discuss or not, just leave a message on the social network, people will be forced to receive the information. This will cause the feeling of oppression and discomfort in the mind (Mohammad, 2017). Social media will lead us to a dangerous path of alienation. People continue to embrace technology, and the result is collective cognitive dissonance and depression reaction.

Also, according to data from Milken Institute, screen time is one of the reasons caused by obesity. While using workgroup phones or tablets during meals, will not only cause a decrease in attention shifting but also make people prone to overeating. In addition, using a workgroup phone for a long time is more likely to cause eye fatigue than looking at a large screen, and long-term exposure to blue light can easily lead to blindness (Hu et al., 2020). Researchers mentioned that recent suicides by many teenagers are believed to be the cause of cyberbullying, and the perfect life presented in social network posts may endanger teenager's mental health (Gardner & Davis, 2014).

Jie et al., (2017) explored flow experience theory and summarized four major characteristics focused on the psychological state of browsing users: (1) UTI between the machine and individual; (2) inner joy; (3) loss of self-perception; (4) enhancement of self-awareness. When people are engaged in activities and fully involve in the situation, they enter a state of flow experience (Csikszentmihalyi, 1975, Dhir et al., 2020, Hoffman & Novak, 1996) which includes four dimensions: attention shifting (ATS), consciousness losing (CCL), time distortion (TMD) and uninterrupted interaction (UTI). (1) ATS: When people enter a state of flow experience, they ignore other external things and focus their attention on a specific range. (2) CCL: when people are underflow experience, they will unconsciously filter out feelings and thoughts that are not related to activities. (3) TMD: when people are in a state of flow, they will not be able to perceive whether time has changed or not. (4) UTI: people have a sense of control between their surroundings and self-interaction behaviors. Since a few types of research focused on WNF, this research is based on flow experience theory and integrates the practical applications of workgroup community, and unifies the use of workgroup community to have greater effects on

negative functions based on four dimensions (ATS, CCL, TMD, UTI).

2.2 Job Stress (JST)

According to the American Institute of Stress, it pointed out that job stress (JST) has become the main source of stress for American adults and is related to the increasing incidence of heart disease, high blood pressure, and other diseases (AIS, 1978). In recent years, negative news reports about stress have also spread frequently. According to the Taipei City Health Bureau, the workplace has been under stress in recent years. Besides, based on the suicide prevention center, 4341 people in Taipei city had attempted suicide in 2004. Among them, young adults aged from 25 to 44 were about 43%, and 15% committed suicide because of JST (Central News, 2016). From the above mentioned, JST has become a major issue that modern people must pay attention to. Individuals face changes and needs of the environment in the work situation. Due to their perception, experience, and abilities, the awareness is unable to cope with the needs of work, resulting in an imbalance in an individual's mentality (Huang & Zhao, 2020). JST is the perception and feeling that an individual has when facing interaction with various people, things, and related to work, the negative feelings generated by stimulus or situation that exceeds his tolerance, which triggers a physical, psychological, and social imbalance (Wang et al., 2020).

The innovation of communication software such as Line and Facebook has caused continuous changes in working, interpersonal problems, and lifestyles. In particular, such workgroup communities have many impacts and problems on workplace interpersonal issues, such as interpersonal tensions for leaving someone on reading, the boss's follow-up contact, and even download cute stickers also creates stress on whether to be fashionable or not and so on. When face-to-face communication messages become text and images, workplace interpersonal in-cloud becomes a question ((Mucci et al., 2016).

Regarding JST, communication group such as the line is the most commonly used by modern people (Lai et al., 2020). It seems to become the main source of stress for office workers. The past research pointed out that 73.7% of office workers have more than one official workgroup communication group. Because of the widespread use of social software, many office workers must add new colleagues and supervisors. However, the researcher also pointed out that only 7.46% of members actively added colleagues/supervisors, and most people passively accepted adding friends (54.61%). After passively accepting to add friends, friends were blocked. Based on the occupational stress indicator, this study takes into consideration context from the information work environment, the characteristics of group members, and sources of stress. There are four dimensions include workload (WKL), communication fatigue (CNF), information load (IFL), and work feedback (WKF) to reflect job stress (JST) (Greenberg,

1996; Lu et al., 1995; Mucci et al., 2016). Therefore, hypothesis 1 can be inferred as follows.

H1: *WNF positively affects JST.*

2.3 Work Well-being (WWB)

With the growing development of positive psychology, when employees demonstrate their inner positive power and nature, they can improve their work performance. Therefore, the discussion related to well-being and happiness began to be explored frequently in past studies. Theories and models related to work well-being (WWB) have also emerged and paid considerable attention (Fisher, 2010; Bakker & Oerlemans, 2011; Xanthopoulou, Bakker, & Ilies, 2012; Pawar, 2013). The research on work well-being (WWB) was towards hedonism and integrated viewpoints as the main orientation. From the perspective of hedonism, Bakker & Oerlemans (2011) utilized the circumplex model of affect to explain employees' work well-being (WWB), which is defined as employees' experience of positive emotions and less negative emotions. This definition not only includes employees' cognitive evaluation of work but also relates to positive emotions such as involvement and well-being. In addition, the state of satisfaction as an emotional experience is also called job satisfaction (JBS). Xanthopoulou, Bakker, & Ilies (2012) believed that work well-being (WWB) is a state of joyful experience that is activated from low to high, including job satisfaction, job dedication, job engagement, and positive emotions. Later, the emergence of broaden-and-build theory also contributes to integrated research on work well-being (WWB). The theory emphasizes that goals and positive emotions are key factors for individuals to experience well-being (Fredrickson, Tugade, Waugh, & Larkin, 2003). Robertson & Flint-Taylor (2008) stated that work well-being (WWB) is the sense of purpose and emotion that people experience at work based on broaden-and-build theory. From the perspectives of an integrated sense of well-being, Fish (2010) believed that work well-being (WWB) is an umbrella term with a broad structure, and defines it as an individual's positive attitude towards work, or positive feelings, mood, emotions, and the low state as well as focus on JBS, emotional commitment, job engagement, job participation, and so forth which are happy experiences related to individual pleasure, favor, or positive beliefs. Work well-being (WWB) is the overall experience of employees on work and corporate organization, including job satisfaction, organizational commitment, and organizational fairness (Schulte & Vainio, 2010).

The basic concept of work well-being (WWB) comes from the extension of well-being, which explores the positive and negative emotions of individuals towards something. Warr (1987) pointed out that work well-being (WWB) is an overall assessment of life quality by individuals based on their standards, and also regards the results of personal achievement, self-realization, or self-positioning as happiness (Ryan&Deci,2001). This research focuses on the psychological, physical, and social satisfaction of employees in

the workgroup community when they receive job-related information. Therefore, Warr (1987)'s definition and measurements for work well-being (WWB) were adopted. Also, job burnout (JBB), job satisfaction (JBS), and job enthusiasm (JBE) reflect the sense of work well-being (WWB). Whenever information poses a threat to the goal of consciousness, there will be an internal disorder, which can also be called psychic entropy, which will lead to self-disintegration and greatly reduce efficiency. If this situation exists for a long period, it will cause serious damage to the self and make it impossible to concentrate on achieving any goals (Mirvis, 1991). When employees are faced with information from a large number of workgroup communities, they cannot actively control their thoughts and behaviors and keep their hearts calm to reduce their psychic entropy. In this case, the inner disorder includes (1) ATS; (2) CCL; (3) TMD; (4) UTI between the machine individual and so on which will lead to psychic entropy. When employees' inner worries increase, all worries in their minds. It will lead to low work efficiency and easy to produce negative emotions as well as decrease work well-being (WWB).

When an individual interacts with people, things, and the surrounding environment, he obtains various forms of support, which in turn can resist pressure, satisfy needs, and increase psychological well-being. Ryan & Deci (2002) believed that when psychological needs cannot be satisfied, it would lead to individual unsuitability, such as anxiety reaction or depression reaction, which will affect the individual's work well-being (WWB). Spector et al. (2004) revealed that job satisfaction comes from both work and organization, such as communication fatigue, inflexible authoritarian leadership, work-family conflicts, lack of opportunities for decision-making participation, poor promotion systems, and loss of control of work, sense of injustice and so forth. When the individual is unable to deal with various problems of work,

stress will be generated, and life satisfaction and well-being are reduced at the same time (Fairbrother & Warn, 2003). JBS is caused by unfair treatment in the workplace, especially for difficulty getting along with supervisors and colleagues, is a particularly harmful source of stress, which is very harmful to an individual's mental health as well as produces job burnout and affect work satisfaction and engagement. When individuals can choose goals and pursuit methods based on their intrinsic value standards and free will, they can increase their well-being in the event (Brunstein, Schultheiss, & Grässman, 1998). Therefore, hypotheses 2-3 were proposed as followed based on the previous literature.

H2: WNF negatively affects WWB.

H3: JST negatively affects WWB.

3. Methodology

This study referred to Csikszentmihalyi (1975), Hoffman & Novak (1996), and Dhir et al., (2020) on WNF, including four dimensions: ATS, CCL, TMD, and UTI as well as people embracing technology on cognitive dissonance and depression reaction. It was to explore WNF leads to WWB down as well as explained whether JST has a negative effect.

3.1 Research Framework

With the transformation of lifestyles, the popularization of information technology has changed the traditional mode of interaction and communication among people. Focusing on the negative effects of technological life, the improvement of public life is a crucial issue, especially for the workgroup community. Although it brings real-time interaction and convenience among people, whether negative functions cause JST and WWB, deprivation of workgroup members is the core theme of this research. This researcher explored the background variables of workgroup members such as gender, marital status, age, working experience, educational background. The research model was formed in Figure 1.

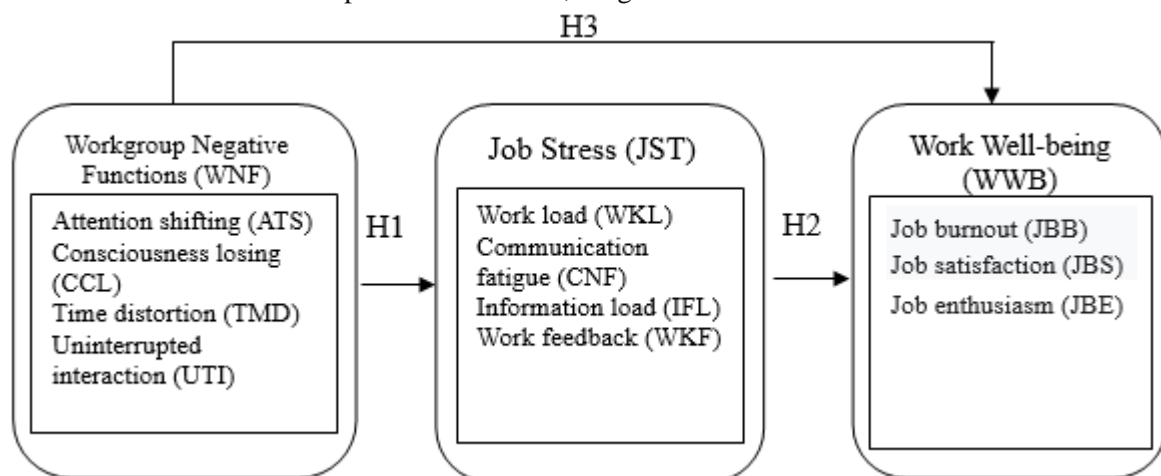


Figure 1 Research Model

3.2 Data Collection and Sampling

The measurements were divided into five parts, which are 64 items including basic information (gender, age, average income, etc.), WNF, JST, and WWB base on the previous

literature. Before the official test on questionnaires, five senior members at different workgroup communities tested the six-point Likert scale to validate the content. A total of 550 questionnaires were distributed to members of the workgroup

communities. The measurement scales utilized a six-point Likert scale to quantify the scores filled in by participants. This study added appropriate inverse questions intending to reduce the participants' motivation for consistency. In addition, in the common method variance (CMV) detection, all variables were analyzed by principal component analysis via Harman's one-factor test to process the exploratory factor analysis and assessed whether there was only a single factor or a single factor occupied majority variance. The results showed multiple factors as well as under the circumstance of unrotated, none of the explained variance for each factor was more than 50%. Therefore, the bias of CMV can be eliminated in this study.

4. Data Analysis

4.1 Descriptive Analysis

In this section, a descriptive analysis of samplings and the scores of each dimension were analyzed. A total of 550

questionnaires were distributed and 470 questionnaires were valid. 70.21% of female participants were mostly in this study. Forage distribution, 47.02% of participants were under 20-29 years, showing that the age group using the workgroup community at work is relatively young. 32.55 % of participants had working experience under one year, whereas 40.85 % of them had s working experience for over 5 years. Most of them (83.62%) were non-manager positions. 61.49 % of participants were front-office workers. Over 50% were workgroup members during work and 15.53 % of them used workgroup community during and off work. 54.26 % of users sometimes checked messages from the workgroup community. 46.17 % of participants communicated about work via workgroup community. Also, 63.62 % of users preferred to use a workgroup community, as shown in Table 1.

Table 1 Sample Structure

Respondent's background	Samples	%
Gender	Male	140
	Female	330
Age	< 30	221
	30-39	62
	40-49	106
	> 50	81
	< 1 years	153
Seniority in current work	1-5 years	125
	>5 years	192
	Manager	77
Position	Non-manager	393
	Front office	289
Work type	Not front office	181
	During work	238
Period of use	During off work	159
	All have	73
Check message frequency	High	148
	Medium	255
	Low	67
Frequency of work communication	High	155
	Medium	217
	Low	95
Hobby of using workgroups	Strong	97
	medium	299
	weak	74

4.2 Reliability and Validity Analysis

In this study, Cronbach's α reliability coefficient, composite reliability, and extracted variance were used to measure the inconsistency within the questionnaires. The Cronbach's α reliability coefficients of WNF for ATS, CCL, TMD, and UTI were 0.702, 0.835, 0.723, 0.807, respectively. The overall Cronbach's α reliability coefficient scale of WNF was 0.883. In addition, the Cronbach's α reliability of WKL, CNF, IFL, and WKF of JBS scales were respectively 0.750, 0.819, 0.827, 0.779, and the overall Cronbach's α reliability

coefficient was 0.908. The Cronbach's α reliability of JBB, JBS, and JBE was respectively 0.891, 0.856, and 0.887 for WWB. The Cronbach's α reliability coefficient of the overall WWB scale was 0.944. Nunnally (1978) and DeVellis (1991) believed that more than 0.7 is an acceptable minimum reliability value. Also, Henson (2001) mentioned that the reliability coefficient should be above 0.7. The reliability coefficient Cronbach's α of this study was all higher than 0.7, which proves that the questionnaire of this study contains certain reliability, as shown in Table 2.

Table 2 Reliability and Convergent Validity

Construct	MLE Loading	MLE Error	Composite reliability	AVE	Cronbach's α
Workgroup negative functions (WNF)			0.876	0.656	0.883
Attentional shifting (ATS)	0.907***	0.022			0.702
Consciousness losing (CCL)	0.912***	0.202			0.835
Time distortion (TMD)	0.919***	0.145			0.723
Uninterrupted interaction (UTI)	0.392***	1.024			0.807
Note: GFI = 0.839, AGFI = 0.786, NFI = 0.810, CFI = 0.835, *** $p < 0.001$.					
Job Stress (JST)			0.924	0.756	0.908
Work load (WKL)	0.805***	0.230			0.750
Communication fatigue (CNF)	0.810***	0.164			0.819
Information load (IFL)	0.841***	0.122			0.827
Work feedback (WKF)	0.589***	0.245			0.779
Note: GFI = 0.856, AGFI = 0.804, NFI = 0.841, CFI = 0.863, *** $p < 0.001$.					
Work well-being (WWB)			0.956	0.880	0.944
Job burnout (JBB)	0.895***	0.222			0.891
Job satisfaction (JBS)	0.953***	0.067			0.856
Job enthusiasm (JBE)	0.958***	0.070			0.887
Note: GFI = 0.957, AGFI = 0.935, NFI = 0.969, CFI = 0.982, *** $p < 0.001$.					

Bagozzi & Yi (1988) pointed out that three evaluation criteria of convergence validity analysis are GFI (goodness-of-fit index), NFI (normed fit index), and CFI (comparative fit index), all of which must be greater than 0.8. RMSR (root mean square residual) should be less than 0.05; CR (combined consistency of indicators and 0.7 is the acceptable threshold (Hair, 1998); AVE (average variance extracted) is greater than 0.5, which means that the construct has sufficient convergent validity (Fornell & Larcker, 1981).

Based on the above criteria, GFI, AGFI, NFI, and CFI were 0.839, 0.786, 0.810, and 0.835, respectively for measuring the workgroup community's negative functions construct, which were all higher than 0.9. Each factor loading was significant, and AVE was all high than 0.5. For the JBS construct, GFI, AGFI, NFI, and CFI were 0.856, 0.804, 0.841, and 0.863, respectively, which were all slightly lower than 0.9, and a load of each factor reached a significant level. The

WWB indicators of GFI, AGFI, NFI, and CFI were 0.957, 0.935, 0.969, and 0.982, respectively. Except for slightly lower NFI, both GFI and CFI were higher than 0.9, and a load of each factor reached a significant level. Therefore, each construct in this study had a sufficient convergent validity.

Compared with each dimension, when the chi-square difference between the unconstrained model and the constrained model was greater than 3.84 and reached a significant level, each dimension possessed great discriminative validity (Anderson & Gerbing, 1988). Moreover, discriminant validity reflects the level by which the measures of each construct are distinctively different from each other. Cronbach's alpha for each construct should be greater than the squared correlation between constructs (Gaski, 1986). Assessments of results indicate strong support for discriminant validity, as shown in Table 3. In summary, satisfactory internal consistency, convergent validity, and discriminant validity have been demonstrated.

Table 3 Discriminative Validity Analysis of Each Construct

Dim.	Avg.	Std.	WNF	JST	WWB
WNF	3.550	0.782	0.883	0.611	(0.254)
JST	3.533	0.846		0.908	(0.367)
WWB	3.248	0.955			0.944

Note:()= Negative correlation

4.3 Structure Equation Model

The main purpose of the correlation analysis is to find the multiple variables that are highly correlated to target data and to have weak or no correlation with each other to avoid multicollinearity problems. In this study, the variables are

correlated to each other with an appropriate coefficient above the 0.8 cut-off value (Hamilton, 1991). Therefore, this study can exclude the influence of multicollinearity problems and is suitable for the structural equation model, as shown in Table 4.

Table 4 Variable Correlation Coefficient Analysis

Dim.	ATS	CCL	TMD	UTI	WKL	CNF	IFL	WKF	JBB	JBS	JBE
ATS	1.000	0.558	0.552	0.510	0.362	0.351	0.347	0.337	(0.126)	(0.209)	(0.178)
CCL		1.000	0.703	0.253	0.466	0.471	0.460	0.416	(0.159)	(0.248)	(0.178)
TMD			1.000	0.362	0.486	0.475	0.429	0.423	(0.140)	(0.262)	(0.193)
UTI				1.000	0.370	0.266	0.251	0.403	(0.126)	(0.183)	(0.195)
WKL					1.000	0.587	0.588	0.501	(0.226)	(0.328)	(0.299)
CNF						1.000	0.613	0.571	(0.225)	(0.288)	(0.281)
IFL							1.000	0.569	(0.251)	(0.316)	(0.273)
WKF								1.000	(0.229)	(0.346)	(0.280)
JBB									1.000	0.742	0.763
JBS										1.000	0.793
JBE											1.000

Note: All variables are moderately correlated, () = negative correlation.

Figure 2 demonstrates the results for the path estimates of the proposed model through AMOS software. Based on Hair et al., (2006), three indicators including absolute fit measure, incremental fit measure, and parsimonious fit measure are utilized to assess goodness of fit. The absolute fit measure index of the entire model and observation data in this study was $\chi^2=167.7$, GFI=0.944, RMR =0.050, RMSEA=0.081,

and AGFI=0.910. Among them, absolute fit measure indexes were acceptable standards, and the chi-square value reached a significant level. The incremental fit measure indexes were NFI=0.939 and CFI=0.953, which were acceptable standards. The parsimonious fit measure indexes were PNFI=0.700 and PGFI=0.710, both of which were acceptable ranges. Thus, the overall theoretical model of this study has a great model fit.

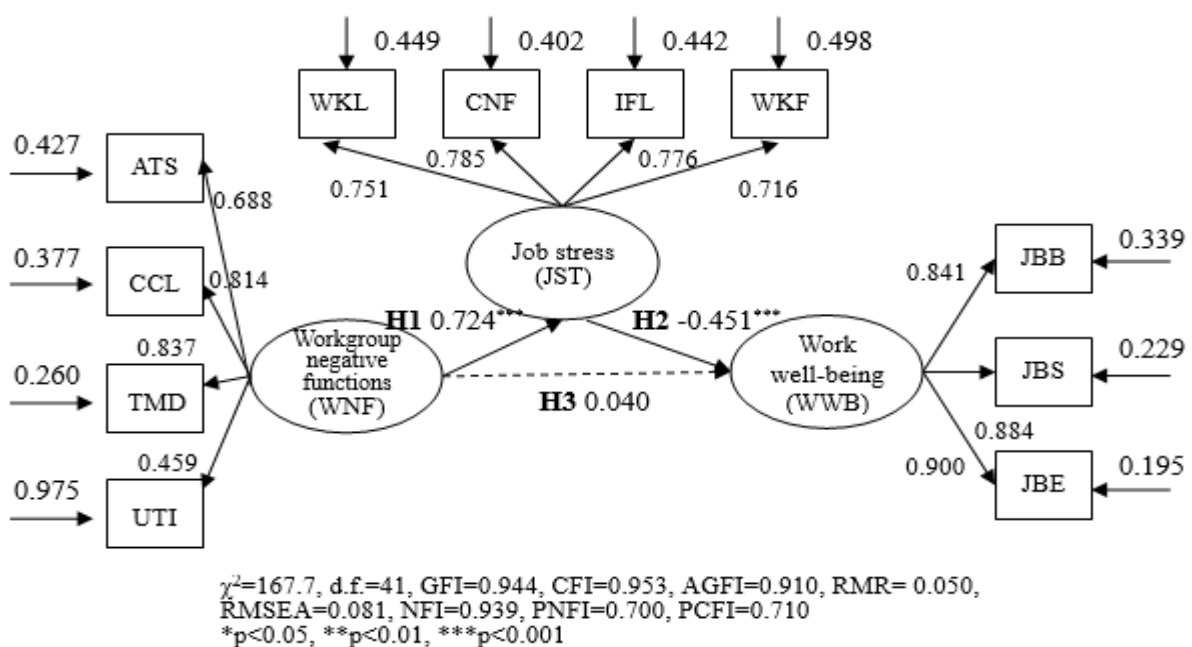


Figure 2 SEM Path of the Research Model

Among the factor loading of WNF, TMD ($\lambda=0.837$) was the most significant, followed by CCL ($\lambda=0.814$), ATS ($\lambda=0.688$), and UTI ($\lambda=0.459$). The results revealed that users were involved in the workgroup community, which increased JBS threats. For the factor loading of JST, CNF ($\lambda=0.785$) is the most significant, followed by IFL ($\lambda=0.776$), WKL ($\lambda=0.751$) and WKF ($\lambda=0.716$). It showed that the workgroup community has increased convenience as a channel of working communication. Because of the lack of direct face-to-face communication, it is easy to produce misunderstandings and increase stress. Finally, for the WWB factor loading, JBE ($\lambda=0.900$) was the most significant, followed by JBS ($\lambda=0.884$)

and JBB ($\lambda=0.841$). The results showed that participants' WWB is best demonstrated by JBE.

Based on the above, it can be found that in addition to WWB, the members' workgroup community during work has significant effects on JST. Also, it can be inferred that the sources of stress are due to their WKL. In addition, following the trend of modern technology, the workgroup community is used as a bridge for various information transmissions and communication and users responding to the workgroup will undoubtedly increase the CNF and IFL. Moreover, when WKF gets worse, it will have significant effects on JST and work efficiency.

5. Conclusion and Implication

This study explores whether negative functions of the workgroup community increase JBS of group members from negative perspectives. The participants were workgroup members because they are all online workers with experienced users in workgroup communities. The research findings help workgroup community leaders think about how to utilize the advantages and characteristics of workgroup community with half effort, remind workgroup members to pay attention to

their WWB and find ways to relieve stress. Except that WNF cannot directly affect WWB, the empirical results of this study were mostly supported, as described in Table 5. H1 was supported with the same results as past researches (Alison & Berthelsen, 1995, Marianne & David, 1997 & Kilgallon, 2006). H2 was supported with the same inferences such as Mahon & Yarcheski (2005), Lu et al. (1995), Ryan & Deci (2002), Fairbrother & Warn (2003).

Table 5 Path Coefficient and Hypothesis

Constructive relationship	Path coefficient	Hypothesis	Result
WNF → JST	0.724***	H1	supported
JST → WWB	-0.451***	H2	supported
WNF → WWB	0.040	H3	Not supported

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

When an individual is in a workgroup, he/she may consider that receiving information related to his/her work. However, in practice, it was found that uninterrupted interaction not only focuses on work but also aims at having entanglement. Therefore, life and work information in the social community cannot be completely separated, and this is also reflected in the UTI dimension. The factor load was 0.392 in Table 2, which means that individual perception seemed to be different on UTI reflected a part of WNF. However, because this study discusses the effects of WNF on JST, and WWB from a holistic perspective, the Cronbach's α (0.883), composite reliability (0.876), and extraction variance (0.656) all achieved the standards. Therefore, this study retained the UTI dimension as well as highlighted the issue that life and work information cannot be completely separated in the social community. On the other hand, WWB was reflected by three dimensions of JBB, JBS, and JBE (reverse scores), and was not affected by an individual's WNF (ATS, CCL, TMD, and UTI). Just as flow experience is the result rather than the goal (Mirvis, 1991). The link between goal and group information seems like a gray zone. When the connection is correct, all efforts will be devoted to achieve the work goal and enter into the mind flow experience. When the connection is incorrect, the internal disorder that causes conflicts of information and goal will enter into psychic entropy. Therefore, WNF cannot directly affect WWB. Therefore, H3 was not supported. It can only indirectly affect WWB through JST ($0.724 \times -0.451 + 0.040 = -0.287$).

In terms of age distribution was mostly 30-39 years old, showing that members of the workgroup community at work were mostly young and middle-aged. In terms of educational background, the majority of participants were from the university, showing that participants had few problems in dealing with learning and operating technology products. The WNF scales showed that the highest score item was "I will use the active community to discuss work affairs with supervisors and colleagues", showing that most virtual workgroup members use workgroup community at work and interact with others, especially in dealing with work matters. The JBS scale

showed that "spam messages sent by others in the group will feel bad" had the highest score, indicating that virtual workgroup members were extremely had no interest in spam messages. And the item "I can't work well due to reminders or vibrations from the workgroup community" had the lowest score, indicating that using the workgroup community during work did not bother their work.

Most members believed that using workgroup communities in their work will not lead to consciousness losing (CCL), but the data revealed that when members focus on operating workgroup social software, whether it is to reply to messages or to organize affairs, they lose their consciousness and unconsciously. Therefore, members should focus on a task and temporarily switch into silent mode for the workgroup community, do not respond to any messages displayed, or respond to the problems in the group after the task is completed. Therefore, the workgroup community can be used as a convey message and confirm tool. In practice, workgroup community groups often become a place for gossip, deviating from their original functions, such as message delivery and confirmation. Therefore, community managers, members, and related organizations can self-regulate the rules of community use as well as focus on and make good use of workgroup community functions.

This study found that the overall JST of workgroup members is slightly heavier. In particular, the popularization of the workgroup community replaces the traditional mode of communication and becomes the best channel for managing matters in life. Workgroup members should set the time point for using the workgroup community to maximize the functions of the workgroup community. In addition, members can use non-working hours to connect with members, share and learn from each other's work and life experiences, and use online communication and interaction to eliminate JST, such as traveling to reading clubs and having mealtime. It can promote emotional exchanges between workgroup members so that they can obtain emotional support for each other. The WNF and JBS of workgroup members are indirect and direct factors that affect members' WWB. Therefore, members should do a

good job of self-exercise planning. On non-working days, members can do home stretching exercises, music healing, and meditation practice during the COVID-19 Outbreak, which can help workgroup members relieve stress and strengthen their fitness (Kekäläinen et al., 2021; Sivan, 2020; Morse et al., 2021). In addition, regular health check-ups can also help members to check their health.

6. Limitations and recommendations

In terms of empirical research, although strict control is implemented in this study, it is still limited by the questionnaire survey. In addition, the user's behavior and habits of the workgroup community are greatly affected by subjective consciousness and may easily lead to biased research results. In terms of data analysis and control, this research only examines the overall perspectives that workgroup members use social software in their work. Future research can differentiate different levels such as categorize workgroup community (games, life, work, and so on) and the

attributes of the workgroup members (occupation, position, position, and so forth).

Although the WNF affects the JST, its advantages of convenience and immediacy still exist. Future studies can extend the model of this study to explore how to use workgroup communities from a positive point of view. The advantages of the communities are to reduce the members' JST to achieve the effects of making good use of information technology. This study only uses quantitative methods to clarify the relationship between WNF, JST, and WWB. Qualitative methods can be used to explore the effects and practices of participants at different levels of using the workgroup community at work in future researches. In addition, it is also possible to explore whether the use of workgroup community is convenient from the perspectives of the community managers, or whether it is another burden brought by technology. These topics are worthwhile to be discussed.

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