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Effects of Personal Factors, Work Characteristics, Organizational Factors, and Physical and Mental Responses on Dealing With Workplace Situations During Social Evolution

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Natural ecology, technological change, the rule of law, and market forces affect social evolution continuously. COVID-19 and strained international relations affected the exchange of social networks, resources, and intelligence. Changing the laws of resource dependence and trust influenced the exchange of resources and intelligence in the global collaborative system. Individuals and organizations must face the risks and challenges of behavioral decoding, natural ecological decoding, and digital decoding in different workplace situations. The cross-domain and cross-cultural collaboration is needed to meet the needs of social evolution and solve relevant problems. Based on public interest and the maximum benefits of ethics, the wisdom of public management, public organizational behaviors, and public policies can be used to maintain balanced social progress and development.

Keywords: global collaborative, COVID-19, public service, safety

Introduction

Technological change, the rule of law, and market forces affect the development of social innovation. In this process, individuals and organizations maintain values and structures to adapt to the environmental situation and political culture and maintain mutual control and balance. Organizations are responsible to people and are under great expectation and social pressure from the public. Due to the global spread of the coronavirus disease in 2019 (COVID-19), hundreds of millions of people have been infected, and millions have died. Public security officers (PSOs), including healthcare workers, police, maritime patrol, and border defense agency personnel, should first shoulder pandemic prevention, crime prevention, and maritime security maintenance project tasks. PSOs regulate interpersonal relationships in the community by imposing coercive force and regard human rights and political freedom as the core values (Bayley, 1985, p. 7; Reichel, 2008). In terms of their roles, they must fulfill epidemic prevention, social order maintenance, law enforcement, and service provision. Meanwhile, they are at risk of being infected by COVID-19, shot by criminals, and facing resistance and violence from lawbreakers (McCarty, Zhao, & Garland, 2007). We need to understand the effect of workplace situations during the social evolution of personnel and organizations and conduct relevant research (Tolbert & Zucker, 1999; Buker, & Dolu, 2011; Tsai, Nolasco, & Vaughn, 2018; Queirós et al., 2020).

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In response to the new situations during social evolution, the paper integrates the interviews with some experts and scholars, and reviews the relevant domestic and foreign literature, unit characteristics, and work content to build the "Personal Factors scale", "Work Characteristics scale", "Organizational Factors scale", and "Physical and Mental Responses scale" to assess the effects of the interaction between the influencing factors of personal, work, and organizational on workplace situations (as shown in Figure 1). The investigators distributed questionnaires randomly to the PSOs field staff, conducted a statistical analysis of the effect of variables, systematically deepened the understanding and discussion, and finally proposed findings and suggestions.

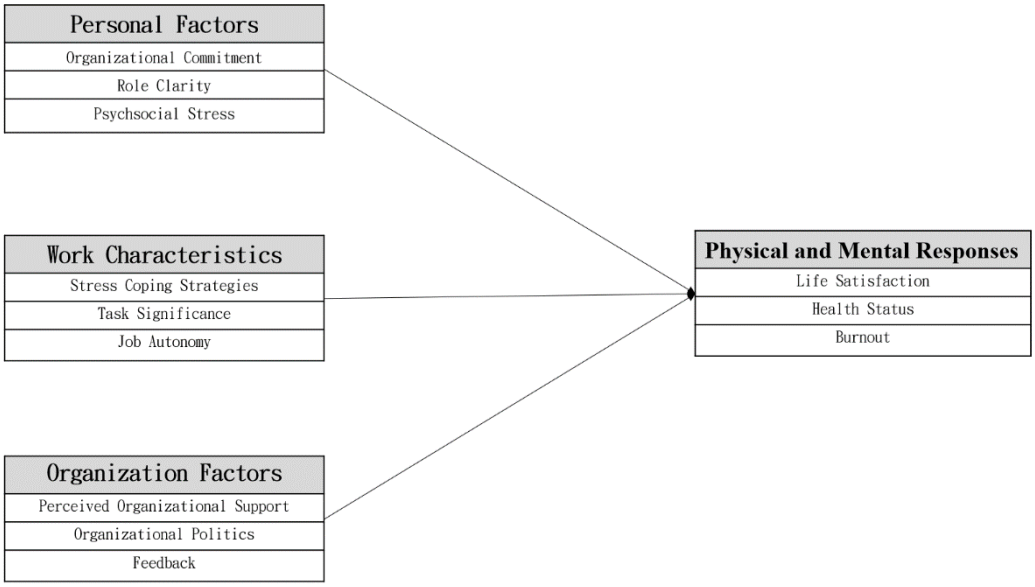

Figure 1. Research framework.

Literature Review

Social systems have been evolving continuously in space over time, and people can use efficiency (benefit), tangible (intangible) resources, construction of social network framework, legitimacy, different community systems, safety culture, and technological and risk management to respond to citizens and the needs for globalization. Under the hierarchical and bureaucratic systems controlled by the old public administration (OPA), the logic and tools of private organizations are introduced to the market-oriented mechanism of new public management (NPM). In the process of globalization, new public governance (NPG) and public service (PS) model emerges and emphasizes public management, public organizational behaviors, and public policies of multi-level and pluralistic relationships involving cross-domain, networking, and participatory governance to solve the increasingly complicated social problems and needs (Ansell & Gash, 2007; Bertalanffy, 1973; Cooper, 2000; Frederickson, Smith, Larimer, & Licari, 2012; Hassan, Toylan, Semercioz, & Aksel,, 2012; Mcallister, 1995, p. 24; Montwiłł, Kasińska, & Pietrzak, 2018; Oyen, 1990; Reichel, 2008; Wilson, 1887). The changing workplace situations during social evolution affect employees' physical and mental responses to their work environment.

Physical and Mental Responses on Dealing With Situations During Social Evolution

Global power, marine protection, and the evolution of public services have increasingly affected personal and organizational abilities to maintain social order and public security (Abreu & Calado, 2017; Bayley, 2001;

Bekkers, Fenger, & Scholten, 2017; Edgar et al., 2014; Hauser, 2017; Houdmont, Cox, & Griffiths, 2010; Casey, 2010; Ostrom, 2007; Southwick et al., 2014; Wu, 2020; Zhang, 2016). We "input" the required trust, resources, and information according to the system theory, after "transformation", and then "output" products or services, as they attain a steady state (Bertalanffy, 1973). This paper incorporated three items as dependent variables (DVs), shown in Table 2. In response to social issues and social needs, individuals and organizations face long-term stressful requirements of the work situation and experience severe stress response to extreme situational stimuli, which affect their life satisfaction, health status, and burnout responses (Baldwin, Bennell, Andersen, Semple, & Jenkins, 2019; Buysse, Reynolds, Monk, Berman, & Kupfer, 1989; Golembiewski & Kim, 1990; Huang & Meng, 2018; Kelley, Siegel, & Wormwood, 2019; Ullah, Hussain, Alam, & Akhunzada, 2016; Vila, 2006).

Life satisfaction. The positive views of yourself, of the world, and of the future were as generators of satisfaction (Diener, Emmons, Larsen, & Griffin, 1985; Santos et al., 2013, p. 234). Humans are driven by innate needs of satisfaction (Maslow, 1943).

Health status. Individuals face stressful requirements of the work situation and experience health status response to situational stimuli (WHO, 2013). Job stress was positively associated to the health impairment (Berg, Hem, Lau, & Ekeberg, 2006).

Burnout. Workers who regularly come into contact with "challenging" citizens in work situations may develop an attitude of emotional exhaustion, leading to a dehumanizing perception of these individuals (Manzoni & Eisner, 2006, p. 621; Queirós et al., 2020). Organizational factors affect perception more than work factors (Collins & Gibbs, 2003). This paper defines physical and mental responses as subjective or objective perceptions of responses to physical and mental conditions. The physical and mental responses to workplace situations are related to personal factors, work characteristics, and organizational factors (Manzoni & Eisner, 2006; Queirós et al., 2020).

Personal Growth and Challenges

As we know, ethics and justice are the basic virtues of human beings (Chu, 2007, pp. 258-264; Lincoln & Guba, 1989, pp. 221-226; Rawls, 2009). Humans are driven by innate needs for survival, safety, love and belonging, esteem, and self-realization (Maslow, 1943). Influencing personal factors include organizational commitment, work routinization, shift work, job satisfaction, situational pressure, role clarity, psychosocial stress, the dangers and risks of being infected while performing the pandemic prevention duties, and attacks from suspects in other incidents (Baldwin et al., 2019; Chen, Wong, & Yu, 2009; Deschamps, Paganon-Badinier, Marchand, & Merle, 2003; Endsley, 1995; Ganster & Schaubroeck, 1991; Gershon, Lin, & Li, 2002; Gong, 1992; Harris, James, & Boonthanom, 2005; Luo & Ruiz, 2012; Miller, Rohleder, Stetler, & Kirschbaum, 2005). This paper defined factors influencing a person's psychological, behavioral, and situational coping. We utilized three items as independent variables in this study, shown in Table 2.

Organizational commitment. "Trust generates mutual understanding, which in turn generates legitimacy and finally commitment" (Heather, Getha-Taylor, Grayer, Kempf, & O'Leary, 2019, p. 54), the dangers and risks of being infected while performing the pandemic prevention duties with the lack of resources (Lazarus & Folkman, 1984; Vila, 2006). Burnout and health impairment negatively correlate with job satisfaction and commitment (Manzoni & Eisner, 2006). Organizational commitment is the mediating effect of public service motivation on performance (Vandenabeele, 2016).

Role clarity. Role theory concerns one of the most important features of social life, characteristic behavior patterns or roles (Biddle, 1986). Individuals develop situational awareness dynamics to handle novel and ambiguous cases and rapidly deal with violence and life-threatening workplace situations (Teas, Walker, & Hughes, 1979). The trait emotional intelligence and emotion management are inversely related to burnout (Zeidner, Hadar, Matthews, & Roberts, 2013). Job perception and organizational factors would cause the psychological effect to be personal and affect self-learning (Chen, 2021a). The leader must be held responsible for the public and the politicians while keeping high morale within the organization to maintain public security, law, and order (Nyhan, 2000; Kotzian, 2011).

Psychosocial stress. It is from ethical and emotional interactions among personal, as well as work and family conflicts (Armstrong & Griffin, 2004; Baldwin et al., 2019; Ganster & Rosen, 2013). The susceptibility to contagion is associated with higher levels of burnout (Nixon, Mazzola, Bauer, Krueger, & Spector, 2011; Zeidner et al., 2013).

Hypotheses (1): Personal factors and life satisfaction are influencing.

Situation Awareness in Work Systems

COVID-19, global climate change, and strained international relations have affected the social network, public interest, and ethical benefits. Changing the laws of resource dependence and trust has influenced the exchange of resources and intelligence in the global collaborative system (Rapkiewicz et al., 2020; Emerson, Nabatchi, & Balogh, 2012, pp. 2-19; Wilson, 1887). In particular, in the criminal field, there are international anti-terrorist operations, cross-border drug smuggling (Battilana & Casciaro, 2012; Chen, 2021b), ocean protection, and global cyber technology (Choo et al., 2006; Edgar et al., 2014). Influencing work characteristics include task significance (Hackman & Oldhan, 1975), job complexity, job autonomy (Hackman & Oldhan, 1975), time pressure, and supervisor support (Anderson, Litzenberger, & Plecas, 2002; Manzoni & Eisner, 2006; Ohly, Sonnentag, & Pluntke, 2006; Queirós et al., 2020). This paper defined implicit or explicit characteristics of an individual or organization at work. This paper adopted three items as independent variables, shown in Table 2.

Stress-coping strategies. In workplace situations, individuals and organizations are faced with behavior decoding (qualitative theory research with 271 participants (Glaser & Strauss, 1967), Table 1, Figure 2), natural ecological evolution of causal relationships (Amy et al., 2020; Murray et al., 2021), artificial intelligence (AI), Internet of Things (IoT), and blockchain technology (BT) (Choo et al., 2006; Lemieux, 2011). Risks and challenges of digital decoding require the understanding of the original meaning of the numerical password in accounting and logistics, as well as the featured practices of the various public security departments and their command operations (Bell, Lauchs, & Le, 2013; Chen, 2021a; 2021b; Goodin & Tilly, 2006, pp. 36-37; Sorrentino, Sicilia, & Howlett, 2018). “Much wisdom is instantiated in conventions, habits, and rules. Instrumental logics must be supplemented with social intelligence” (Scott, 2005, p. 19). However, as the complexity and dynamics of the environment increase, many decisions are required across a fairly narrow space of time, and tasks are dependent on an ongoing, up-to-date analysis of the environment (Endsley, 1995, p. 34).

Task significance. The safety culture recognises the presence of an interactive or reciprocal relationship between psychological, situational, and behavioural factors (Cooper, 2000). The boundary-crossing networks expand social capital (Lownders & Skelcher, 1998). Burnout and health impairment positively correlate with work stress (Agnew, 2001; Berg, Hem, Lau, & Ekeberg, 2006; Manzoni & Eisner, 2006; Queirós et al., 2020).

Job autonomy. Individuals and organizations respond to different public security situations based on their attitudes, values, and norms (Paoline, 2003; Queirós et al., 2020), and in the evolution of governance of the public value theory, they must have the wisdom to make organizational learning dynamic (Nonaka & Takeuchi, 1995; Crossan, Lane, & White, 1999) and perform moral and systemic management to create public value and public trust (Schön, 1973, p. 10; Van Dooren, Bouckaert, & Halligan, 2010).

Hypotheses (2): Personal factors and health status are influencing.

Dynamic Environments Organizational Contingency: Risks and Opportunities

Organizations are dynamic, multifaceted systems that operate in dynamic environments (Cooper, 2000). Government organizations respond to society's needs and problems in a collaborative model (Ansell & Gash, 2007; Heather et al., 2019; Lank, 2006). Influencing organizational factors include social support (Santos et al., 2013), organizational trust, perceived organizational support, emotional support from family, financial support, organizational politics, feedback, open communication, consultative management skills, administrative support, and social support (Anderson et al., 2002; Koschmann, 2012; McCreary & Thompson, 2006; Murray & Gibbons, 2007; Queirós et al., 2020; Santos et al., 2013; Vila, 2006; Fu & Satish, 2014). Burnout and health impairment positively correlate with organizational stress (Manzoni & Eisner, 2006). This paper defined the subjective, objective, or internal and external factors that affect an organization's response to work situations. We utilized three items as independent variables in this study. Research questions guiding this study and definitions of theoretical operational are shown in Table 2.

Perceived organizational support. Based on consensus and collaborative leadership, the collaboration crosses organizational boundaries to implement cross-domain (cultural) tasks (Balkundi & Kilduff, 2006; Klijn & Koppenjan, 2012; Lank, 2006; Tyagi & Dhar, 2014) and combine social epidemic prevention (Rapkiewicz et al., 2020), crime control, crime prevention (Lemieux, 2010; 2015; Lemieux & Bales, 2012), welfare, and service roles to prevent abuse of power (Bayley, 1985, p. 184; Chen, 2021a; 2021b; Chen & Li, 2020; Hauser, 2017, p. 20-25; Li, 2004; Manzoni & Eisner, 2006; Mitra & Sambamoorthi, 2014; Ohly et al., 2006; Queirós et al., 2020; Robertson, 1994; Scott, 2005, p. 5; Xu, 2018).

Organizational politics. Resource dependence theory believes that organisations rely on resources—intangible or tangible resources, information, and trust—from the external world to survive and thrive (Han, 2017; Tyagi & Dhar, 2014). Media pressure, political pressure, lack of resources, and long working hours were found to be the most important factors causing stress (Nisar, Rasheed, & Qiang, 2018).

Feedback. Organizations are adapting to their changing environments, that change from one fit to another over time (Donaldson, 2006; Hackman & Oldhan, 1975). Intelligence is the information used by a country or organization for strategy, policy, security, economy, and technology (Chen & Li, 2020; Lemieux, 2015). Nevertheless, at the very beginning of the global pandemic of COVID-19, global climate change, and strained international relations, public security organizations used rationality, politics, culture, and institution in the aspects of policy dynamics and policy review and employed global collaboration and policy guidance to execute the territorial front-line pandemic prevention and maritime security project tasks (Primecz, Romani, & Sackmann, 2011; Bekkers et al., 2017; Wu, 2018; 2020), thus, causing physical and mental fatigue to the individual.

Hypotheses (3): Organizational factors and burnout are influencing.

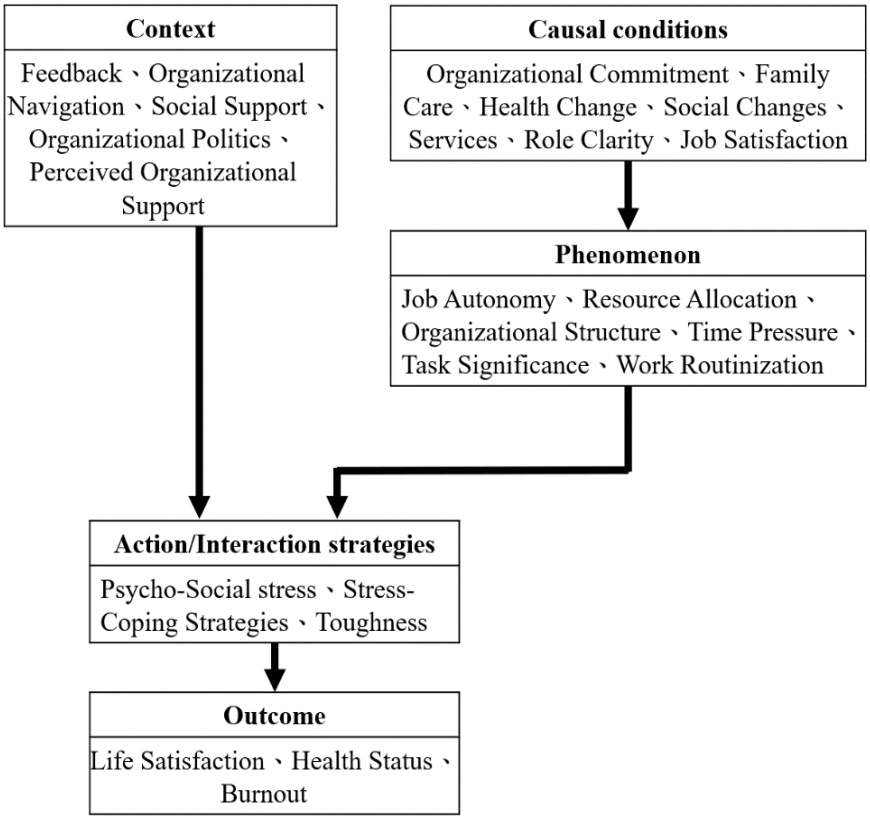

Figure 2. Coding paradigm of CGA Officers' behavioral decoding of behavioral meaning to workplace situations.

Table 1

Coding the Behavior of Public Security Officers (n = 271)

Item	Category	First sub-category	Second sub-category
Causal conditions	Organizational commitment	Poor working environment, No reasonable treatment	Maintenance management, Work motivation
	Family care	Family care, Economic factors	Economic, Motivation
	Health	Air pollution, Diet	Health management
	Social changes	Environmental change, Impact of pension reform	Cognitive perception, Social changes
	Services	High risk period, Law enforcement	Management, Risk
	Role clarity	Unclear job role, Counseling to be done by women	Role, Growth and development
	Job satisfaction	Physical and mental exhaustion, Great gap between expectation and reality, Aging	Cultural and cognitive assessment
Phenomena	Job autonomy	No time to exercise, No overall planning	Control
	Resource allocation	Unfair division labor, No personal space and privacy, Unfair welfare	Resource allocation, Human rights
	Organizational structure	Closed system, Poor organizational structure design	Organizational contingency, Organization
	Time pressure	Abnormal shifts, Too long working time	Management
	Task significance	Danger of task, Work efficiency, Contact failure through communications	Safety culture, Risks
	Work routinization	Shift duty, Mere formality, Technological	Meaningful work, Administrative management

Table 1 to be continued

Contexts	Feedback	Report mechanism, Rolling revision	Feedback, Coordination
	Organizational navigation	Leadership, Performance assessment system	Leadership, Performance management
	Social support	Budget, Cultural and recreational activities, Being unkind to new staff, Social insurance	Social support, Social network, Conflict
	Organizational politics	Promotion and transfer system, Limited resources, Rewards and punishments	Politics, Resource allocation, Incentives
	Perceived organizational support	Caring measures, No feeling, Unfair opportunities	Justice, Cognitive assessment, Restoration ability
Action/interaction strategies	Psycho-social stress	Great physical and mental stress, Failure in love, Wake up from sleep	Situational stress, Chronic stress, Acute stress
	Stress-coping strategies	Perceptual responses, Rest	Situation Awareness, Stress response
	Toughness	Diversified training, Care and protection, Medication	Diversified skills, Humor and coping skills
Outcomes	Life satisfaction	Expectation met, Expectation not met, Marriage topic	Feelings of gratitude and happiness
	Health status	Aging, physical and mental exhaustion, Physical injury	Physiological and Health risks
	Burnout	Job burnout, Early retirement scheme, Anxiety	Emotional exhaustion, Personality literacy

Table 2

Operational Definition of Work Scale

Facet	Work scale	Operational definition
Personal factors	Organizational commitment	Degree of recognition and participation in public security organization (Manzoni & Eisner, 2006, p. 620)
	Role clarity	An individual's level of understanding of job expectation information and how to implement it (Teas et al., 1979)
	Psychosocial stress	An individual's response to imbalance between needs and self-perception (Anderson, Litzenberger, & Plecas, 2002, p. 3)
Work characteristics	Stress-coping strategies	Including cognitive and behavioral efforts in using problem-solving or emotion-focused strategies to manage/cope with/reduce stress caused by great events (Queirós et al., 2020, p. 2)
	Task significance	Degree of a job's significant effects on the lives or work of others, no matter directly in the organization or in the external environment (Hackman & Oldhan, 1975, p. 161)
	Job autonomy	Employees' degree of freedom to schedule work and determine the procedures to be followed in performing work (Hackman & Oldhan, 1975, p. 161)
Organizational factors	Perceived organizational support	Employees' global belief that the organization values their contributions and cares about their well-being (Tyagi & Dhar, 2014, p. 651)
	Organizational politics	People who make use of social influence to provide incentives so as to promote, help, or protect the interests of the parties concerned (Tyagi & Dhar, 2014, p. 651)
	Feedback	The required effective, direct, and clear information about the performance of work acquired by employees during implementation of work (Hackman & Oldhan, 1975, p. 162)
Physical and mental responses	Life satisfaction	An individual's subjective assessment of overall expectation for life (Diener, Emmons, Larsen, & Griffin, 1985, p. 71; WHO, 2013)
	Health status	Personally perceived current health status (WHO, 2013)
	Burnout	Long-term responses to the sources of chronic emotional and human pressures at work (Queirós et al., 2020, p. 2)

Research Methods

Research Design and Data Collection

This paper was conducted in compliance with academic ethics, and had obtained informed consent from all the participants (Lincoln & Guba, 1989, pp. 221-226). In order to ensure the privacy of the samples in filling out the questionnaire, an anonymous method was adopted. The period of the questionnaire survey lasted for three months, from November 2020 to January 2021. Among the 13,000 R.O.C. Coast Guard organizations, a total of 1,413 questionnaires were distributed, and 1,242 questionnaires were returned. The returned questionnaires were reviewed one by one by the researcher.

Initially, 224 questionnaires with more than five missing questions or the same response for all items were considered invalid, and 1,018 valid questionnaires were collected. The researcher entered the compiled data into an Excel spreadsheet, which was then converted to SPSS format. A code was created for each questionnaire. The staff working at 22 units of a public security organization served in the sea areas (including the Pacific Ocean, the South China Sea, and the surrounding sea areas of Taiwan), and the community. Of the participants, 12.2% of the samples were women. To avoid identifying any participants based on age, gender, and the serving unit, we did not collect any identifying information from the participants.

Questionnaire Survey

Besides the basic demographic information, other measures included the “Personal Factors scale”, “Work Characteristics scale”, “Organizational Factors scale”, and “Physical and Mental Responses scale”. The questions for each scale were partly adapted from the questionnaires developed by other researchers from the references of the relevant literature. In addition, experts in survey development made reviews and suggestions twice until the contents were all finalized. The questionnaire items were measured on a four-point Likert scale, where a higher score indicated a greater frequency of behavior. The three-item subscale showed poor collinearity diagnostics; thus, three items were deleted. First, the paper describes sociodemographic data. Second, the personal factors scale depicts the personal’ opinions towards the current workplace situations. 17 items measured organizational commitment, role clarity, and psychosocial stress. The two-item scale showed poor reliability and validity; thus, two items were deleted, and the shorter version of the scale achieved significance. Third, the work characteristics scale assesses the personal and organizational perception of the characteristics of public security work and its pressures, specifically, stress-coping strategies, task significance, and job autonomy measured with 14 items.

Fourth, the organizational factors scale assesses opinions on the agency’s operation to identify the sources of organizational stress. The scale measures perceived organizational support, organizational politics, and feedback from the job with 19 items. After deleting two items, the scale achieved adequate reliability and validity. Fifth, the physical and mental response scale assesses employees’ physical and mental states, specifically life satisfaction, health status, and burnout, using 15 items. Item analysis supported the reliability and validity of the scale. Burnout is a process of cognitive and emotional transformation measured by five inverse items. Sums between 16 and 20 indicate a high passion for work (such as demonstrating fulfillment of expectation for future development of personal career, being a source of personal achievement), scores between 11 and 15 indicate psychological fatigue (psychological or emotional exhaustion while performing tasks), scores between 6 and 10 indicate laziness (showing negative attitudes, such as indifference, when performing tasks and interacting with people), and scores between 1 and 5 indicate guilt (negative behaviors and attitudes arising from labor relations and interactions; the staff is proactively looking for other job opportunities).

Statistical Analysis

The paper makes analysis using a statistical software, Statistical Package for Social Sciences (SPSS), version 18. The previously collected data were analyzed, with data correction firstly made for the questions in the reverse order. After principal component analysis, post-rotation screening was performed, and those items failing to reach the level were deleted. After certain items were selected for each variable subscale, the reliability and validity are analyzed. The factor structure explains the "task significance", with Cronbach's α being 0.938; and its explained variation is 84.41%, as shown in Table 3.

Table 3

Descriptive Statistics (Database 1; n = 1,018)

Working scale	Mean	SD	Min.	Max.	Cronbach's α	Explained variation	Male (n = 882)	Female (n = 124)
Organizational commitment	18.55	3.61	1	28	0.872	57.551	18.65	17.88
Role clarity	11.73	2.36	1	16	0.856	70.172	11.76	11.51
Psychosocial stress	9.36	2.56	1	16	0.821	65.145	9.28	9.8
Stress-coping strategies	12.63	2.79	1	20	0.845	61.82	12.63	12.66
Task significance	10.22	2.78	1	16	0.938	84.411	10.15	10.56
Job autonomy	12.23	2.84	1	20	0.842	61.591	12.27	12.08
Perceived organizational support	26.6	5.17	1	40	0.901	53.301	26.65	26.27
Organizational politics	9.2	2.15	1	16	0.800	62.918	9.15	9.49
Feedback	13.8	2.85	1	20	0.894	70.324	13.86	13.39
Life satisfaction	12.97	2.69	1	20	0.868	66.486	13.01	12.6
Health status	12.01	3	1	20	0.840	61.18	11.92	12.51
Burnout	13.38	2.94	1	20	0.817	58.326	13.42	13.17

Data Analysis and Discussion

The paper examines the backgrounds of the interviewees, and conducts difference analyses of different continuous variables. For example, Scheffé's method is used in statistical operations to test all the possible contrasts. With the characteristics of the largest critical value and the least significance, Scheffé's method can be applied to distribution among groups with different number of people per group and abnormal distribution (Qiu, 2010). Besides, regression analysis explores the factors of and impacts on physical and mental responses, and is presented as follows.

Backgrounds of Interviewees and Differences Between Continuous Variables

The basic demographic variables measured in this paper assessed the number of days per week during which the participants engaged in sports for at least 20-30 minutes per week and seniority. The results of showing statistically significant differences between the various continuous variables are shown in Tables 4-7.

Differences between the number of days per week participating in sports for at least 20-30 minutes across different continuous variables. As summarized in Table 4, "psychosocial stress" was significant at 4.840 (p = 0.000). The average value of participation in sports three times per week was greater than that of no participation in sports, showing that participation in sports three times per week has a greater effect on easing psychosocial stress and helps improve physical and mental responses. As seen from Table 5, the post hoc multiple

comparisons among the samples participating in sports every week and Scheffé's method for analyzing "perceived organizational support" revealed that the samples participating in sports three times per week scored worse than those who did not participate in sports (average difference -3.044, p = 0.02), showing that organizational support could be further improved.

Difference analysis between seniority categories by different continuous variables. As summarized in Table 6, "psychosocial stress" was significant -4.442 (p = 0.000), and the average value of 26-30 years of seniority was smaller than that of below five years of seniority, indicating that 26-30 years of seniority helps cope better with psychosocial stress, and is conducive to more effective physical and mental responses. Similarly, below five years and six-ten years of seniority were associated with better health status, as shown in Table 7.

Stepwise Regression Analysis

Taking life satisfaction (Made 1), health status (Made 2), and burnout (Made 3) as dependent variables, we added nine items, including organizational commitment and others, as independent variables in stepwise regression analysis and employed the least number of variables to understand which independent variables have the best predictive effect on the various dependent variables. We also performed collinearity diagnostics.

Stepwise regression analysis was conducted with health status as the dependent variable. As shown in Table 8, four of the nine variables, including stress-coping strategies, were included in the regression model as independent variables. The square of the coefficient of determination R was 0.319, indicating that the above four variables can explain 31.9% of the variance in the participants' perception of their health status. The collinearity (CI value) was 16.114, implying that the collinearity was not significant. Finally, the regression coefficients beta for three out of four items were positive, indicating a positive correlation with health status. "Stress Coping Strategies" (beta = 0.261, t = 8.701, p = 0.000) had a positive effect on the perception of health status, implying that as a stress coping strategy increased by a standard unit, perception of health status increased by 0.261 standard unit, and the predictive power of the perceived health status was 20.50% (Table 9).

Findings and Discussion

The paper explores the variables affecting individuals' and organizational physical and mental responses. All correlations between different variables were statistically significant, as shown in Figure 3. For example, stress-coping strategies correlated positively with health status, and organizational commitment correlated negatively with burnout. Regarding verification of the hypotheses, as summarized in Table 9, personal factors had significantly more predictive power on physical and mental responses than organizational factors. Personal and organizational factors can be enhanced to improve physical and mental responses. However, job characteristics did not significantly predict physical and mental responses.

This study's results showed the indicator values were similar for men and women. Table 7 shows that after using Scheffé's method, 6-10 years of seniority and 26-30 years of seniority correlated negatively (-1.384, p = 0.003). However, psychosocial stress correlated positively with health status, showing that the officers with greater psychosocial stress manage their health better.

Figure 3 shows that the relationships predicted in Hypotheses 1, 2 and 3 were supported. The associations proposed in Hypothesis 1 have a more significant predictive effect and those in Hypothesis 3 have a less significant predictive effect, in Table 9. Personal factors had the greatest predictive power. The life satisfaction

had the greatest predictive effect of 21.38% on organizational commitment. Regarding the overall model, health status has the greatest effect on physical and mental responses, accounting for 31.86%. The post hoc multiple comparisons in Table 7 revealed significant differences between seniority groups. The differences between task variables were insignificant, in Table 9. First, the similarity of tasks may have precluded us from finding significant differences. Although differences may exist in nature, the significance of the differences cannot be shown due to the influence of experimental error. With the continuous evolution of society, the quality and quantity of work will change. Based on the safety culture (Cooper, 2000), special attention should be paid to the interaction between situations, people's thought processes and behaviors to facilitate response and improve service quality.

Understanding Personal Factors Affecting Work and Happiness

As shown from the regression analysis of Hypothesis 1 in Table 9, there is a significant predictive effect, especially in personal factors. Regarding the personal factors affecting physical and mental responses, organizational commitment accounted for 21.38% of the variance in life satisfaction, implying that the more the organizational commitment, the better the life satisfaction. On the other hand, as shown in Tables 4 and 5, Scheffé's method revealed statistically significant differences when comparing different individuals in the number of days per week during which they participated in sports for at least 20-30 minutes. Besides, Tables 6 and 7 show the results of Scheffé's method, indicating that those with fewer than five years of seniority and those with 26~30 years of seniority correlated negatively with both psychosocial stresses (t = -4.442, p = 0.000) and health status (average difference = -1.200, p = 0.005).

Therefore, among personal factors, six important effects highlighted the need for knowledge-action interaction to improve individuals' perception of work and cope with workplace situations, risks, and challenges (Maslow, 1943). They are producing strategic leaders (Balkundi & Kilduff, 2006), enhancing trust, leading and collaborating with the organization to move forward. With a common understanding, they should use different resources and formulate different strategies. They should possess the wisdom of flexible and dynamic learning, and good adaptability; take concerted action inside and outside the organization; and protect their interests and develop common interests to increase people's well-being (Donaldson, 2006; Lank, 2006).

Cross-Domain and Cultural Perception of Collaboration to Meet the Needs of Social Evolution and Solve Relevant Problems

As shown from the regression analysis of the relationships proposed in Hypothesis 2 in Table 9, stress-coping strategies had a significant predictive effect on health status. Besides, stress-coping strategies had the greatest impact on dependent variables (20.50% of variance in prediction analysis), indicating that promoting stress-coping strategies would also incentivize public service (Vandenabeele, 2016). Concerning globalization and cross-domain and cross-cultural development (Lank, 2006), the organization has used various collaboration tentacles and multiple approaches to observe dynamic societal changes and adopt responsive policies. Organizations use technical skills to improve work tools and deal with environmental changes in the workplace. Using interaction via authoritative texts (Koschmann, 2012) and adjustment of actions, and also under the extension of time and space, consensus and wisdom sharing are deepened, and the influence of government cooperation is expanded.

Figure 3. Figure of correlations among variables (Data Sheet 1, n = 1,018, all is ***).

Table 4

Difference Analysis of the Samples Participating in Sports for at Least 20-30 Minutes Each Time per Week in Different Variable Subscales

Subscale	Group	*N*	Average	S.D.	*t*	*p*
Organizational commitment	0	83	17.458	3.318		
	3	164	19.293	3.630	-3.860	0.000
Stress coping strategies	0	83	11.964	2.511		
	3	164	13.128	2.803	3.191	0.002
Role clarity	0	83	11.157	2.266		
	3	164	12.220	2.300	3.448	0.001
Psycho-social stress	0	83	8.205	2.443		
	3	164	9.829	2.515	4.840	0.000
Perceived organizational support	0	83	24.169	5.594		
	3	164	27.213	4.960	-4.363	0.000
Organizational politics	0	83	8.590	1.951		
	3	164	9.561	2.094	3.520	0.001
Feedback	0	83	13.084	2.968		
	3	164	14.140	2.711	-2.800	0.006
Life satisfaction	0	83	11.711	2.639		
	3	164	13.183	2.617	-4.164	0.000
Health status	0	83	10.627	3.087		
	3	164	12.390	3.077	4.251	0.000
Burnout	0	83	13.060	2.634		
	3	164	13.872	2.816	2.186	0.030

Table 5

Difference Analysis of Post Hoc Multiple Comparisons of the Samples Participating in Sports for at Least 20-30 Minutes Each Time per Week

Subscale	Times per week (I)	Times per week (J)	Analysis	A.D.	S.E.	*p*
Life satisfaction	0	2	Scheffee	-1.558	0.351	0.000
	0	3	Scheffee	-1.472	0.354	0.000
Psycho-social stress	0	3	Scheffee	1.624	0.345	0.005
	0	5	Scheffee	1.832	0.448	0.035
Perceived organizational support	0	3	Scheffee	-3.044	0.711	0.020
Health status	0	3	Scheffee	1.764	0.407	0.017
	0	4	Scheffee	2.429	0.528	0.007
	0	7	Scheffee	2.790	0.700	0.046

Table 6

Difference Analysis of Seniority Samples in Different Variable Subscales

Subscale	Group	*N*	Average	S.D.	*t*	*p*
Psycho-social stress	5 years or less	386	9.674	2.403		
	26-30 years	180	8.711	2.395	-4.442	0.000
Psycho-social stress	6-10 years	214	9.589	2.664		
	26-30 years	180	8.711	2.395	-3.410	0.001

Table 7

Difference Analysis of Seniority in the Post Hoc Multiple Comparisons

Subscale	Working years (I)	Working years (J)	Analysis	A.D.	S.E.	*p*
Job satisfaction	5 years or less	26-30 years	Scheffee	-.733	0.191	0.041
Job satisfaction	6-10 years	26-30 years	Scheffee	-1.073	0.214	0.001
Health status	5 years or less	26-30 years	Scheffee	-1.200	0.267	0.005
Health status	6-10 years	26-30 years	Scheffee	-1.384	0.299	0.003
Task significance	5 years or less	26-30 years	Scheffee	-1.030	0.248	0.017
Health status	6-10 years	26-30 years	Scheffee	-1.064	0.278	0.015

Table 8

Table of Stepwise Regression Analysis (Data Sheet 1, n = 1,018)

Made	Made 1				Made 2				Made 3			
Variable	*B*	Beta	*t*	*p*	*B*	Beta	*t*	*p*	*B*	Beta	*t*	*p*
(constant)	3.595		7.327	0.000	2.229		4.550	0.000	3.019		5.194	0.000
Organizational commitment	0.219	0.293	9.226	0.000					(0.206)	(0.253)	(7.919)	0.000
Role clarity									0.157	0.126	3.966	0.000
Psychosocial stress	(0.133)	(0.127)	(4.042)	0.000	0.286	0.244	7.977	0.000	0.108	0.094	2.873	0.004
Stress-coping strategies	(0.079)	(0.081)	(2.672)	0.008	0.281	0.261	8.701	0.000	0.096	0.091	2.746	0.006
Task significance												
Job autonomy					(0.124)	(0.118)	(4.376)	0.000				
Perceived organizational support	0.073	0.141	3.922	0.000								

Table 8 to be continued

Organizational politics					0.221	0.159	5.378	0.000	0.175	0.128	4.178	0.000
Feedback	0.081	0.086	2.553	0.011					(0.063)	(0.061)	(2.024)	0.043
R	0.534				0.564				0.509			
R^2	0.286				0.319				0.260			
CI	20.047				16.114				21.313			
Standard error	2.282				2.478				2.534			

Table 9

List of Prediction Analysis of Independent Variables vs. Dependent Variables

D. I. V. \ V.		Personal factors			Work characteristics			Organizational factors			Sum
		Organizational commitment	Role clarity	Psychosocial stress	Stress-coping strategies	Task significance	Job autonomy	Perceived organizational support	Organizational politics	Feedback	
Physical and mental responses	Life satisfaction	21.38%		2.15%	0.54%			4.03%		0.46%	28.55%
	Health status			7.54%	20.50%		1.29%		2.53%		31.86%
	Burnout	17.03%	1.56%	0.67%	4.46%				1.93%	0.30%	25.96%

Conclusions and Suggestions

In social evolution, personnel and organizations work together to address social issues and needs based on ethics and public interests. After all, it is difficult to obtain accurate information about how individuals and organizations work together to address social issues, as definitions of culture and institutions vary from country to country, and experts find limitations or cultural differences in understanding the collected statistical data. However, individuals and collaborating organizations have a consistent ethical belief in the implementation and learning process. Under historical independence, field specialization, intellectual property rights, and power balance, people can thus adapt to broader political and administrative changes; systematically improve concepts, methods, and theoretical forms in organization behavior, public management, and public policy; and contribute to public institutions' creation, maintenance, and service practices.

Society continues to evolve while fulfilling safety tasks, persons and organizations strive for a balance between the project tasks of pandemic prevention, crime control, public order maintenance, and a wide range of responsibilities for public welfare. Besides, global collaboration has been made with increasingly more public and private action implementers to meet people's complicated and diverse public security-related needs.

Global Collaborative in the Natural-Ecological Evolution, Socio-Ecological Evolution, Introspection, and Feedback on Strategic Organization Policies

To sum up the introspection and feedback of the personal factors in this paper, organizational commitment is mainly presented in life satisfaction and burnout. The regression analysis revealed the strongest relationship between stress-coping strategies and health status (see Table 9), indicating that in the aspects of global collaboration in the socio-ecological evolution as well as organization strategic policies, individuals are primarily responsible for the safety and servicing (Ansell & Gash, 2007). The system is based on the intelligence input of personnel according to their needs, processes, and situations so that the system produces the desired outcome (Bertalanffy, 1973).

Introspection and Feedback of the Micro-, Medium-, and Macro-Views

First, to address the origin and value at the system level, making good use of technology and stressing maximization of public value, efficiency, ethical benefits, and economy is important. Second, at the sub-system level, it is crucial to stress specialization, consensus, sharing, planning, clear distribution of competencies, and political neutrality. Third, human rights and humane treatment must be emphasized personally. Finally, the task is to develop a unique theoretical core to maintain values, organizational structures, and personal opinions to adapt to mutual constraints and balance politics and culture, achieving personal best of individuals and organizations unity in diversity of collaborative partnership and wisdom connecting to tomorrow.

References

Abreu, A., & Calado, J. M. F. (2017). Risk model to support the governance of collaborative ecosystems. *IFAC, 50*(1), 10544-10549.

Agnew, R. (2001). Building on the foundation of general strain theory: Specifying the types of strain most likely to lead to crime and delinquency. *Journal of Research in Crime and Delinquency, 38*, 319-361.

Anderson, G. S., Litzenberger, R., & Plecas, D. (2002). Physical evidence of police officer stress. *Policing: Int'l J. Police Strat. & Mgmt, 25*, 399.

Ansell, C., & Gash, A. (2007). Collaborative governance in theory and practice. *Journal of Public Administration Research and Theory, 8*, 543-571.

Armstrong, G. S., & Griffin, M. L. (2004). Does the job matter? Comparing correlates of stress among treatment and correctional staff in prisons. *Journal of Criminal Justice, 32*(6), 577-592.

Baldwin, S., Bennell, C., Andersen, J., Semple, T., & Jenkins, B. (2019). Stress-activity mapping: Physiological responses during general duty police encounters. *Frontiers in Psychology, 10*, 2216.

Balkundi, P., & Kilduff, M. (2006). The ties that lead: A social network approach to leadership. *The Leadership Quarterly, 17*, 419-439.

Battilana, J., & Casciaro, T. (2012). Change agents, networks, and institutions: A contingency theory of organizational change. *Academy of Management Journal, 55*(2), 381-398.

Bayley, D. H. (1985). *Patterns of policing—A comparative international analysis*. New Brunswick: Rutgers University Press.

Bayley, D. H. (2001). *The new structure of policing: Description, conceptualization and research agenda*. US Department of Justice, Office of Justice Programs, National Institute of Justice.

Bekkers, V., Fenger, M., & Scholten, P. (2017). *Public policy in action—Perspectives on the policy process*. Cheltenham, Northampton: Edward Elgar Publishing.

Bell, P., Lauchs, M., & Le, V. (2013). Elements of best practice in policing transnational organized crime: Critical success factors for international cooperation. *International Journal of Management and Administrative Sciences, 2*(3), 24-34.

Berg, A. M., Hem, E., Lau, B., & Ekeberg, Ø. (2006). An exploration of job stress and health in the Norwegian police service: A cross sectional study. *Journal of Occupational Medicine and Toxicology, 1*(1), 26.

Biddle, B. J. (1986). Recent developments in role theory. *Annual Review of Sociology, 12*(1), 67-92.

Buker, H., & Dolu, O. (2011). Police job satisfaction in Turkey: Effects of demographic, organizational and jurisdictional factors. *International Journal of Comparative and Applied Criminal Justice, 34*(1), 25-51.

Buysse, D. J., Reynolds, C. F., Monk, T. H., Berman, S. R., & Kupfer, D. J. (1989). The Pittsburgh sleep quality index: A new instrument for psychiatric practice and research. *Psychiatry Research, 28*(2), 193-213.

Casey, J. (2010). *Policing the world: The practice of international and transnational policing*. Durham NC: Carolina Academic Press.

Chen C. I. (2021a). Research on influential factors of work performance of public-private partnerships (PPP)—Case study of maintenance and repair work of patrol ships in coast guard administration. *Police Science Bimonthly, 51*(4), 79-104.

Chen C. I. (2021b). Research collaborative of policing—A case study of Taiwan cross-border drug investigation. *US-China Law Review, 18*(5), 246-259.

Chen, R. S., & Li, T. S. (2020). Identifying the multiplex network of collaborative decision-making in municipal disaster preparation and response. *Journal of US-China Public Administration, 17*(5), 192-202.

Chen, W. Q., Wong, T. W., & Yu, T. S. (2009). Mental health issues in Chinese offshore oil workers. *Occupational Medicine-Oxford, 59*(8), 545-549.

Choo, C. W., Furness, C., Paquette, S., Van Den Berg, H., Detlor, B., Bergeron, P., & Heaton, L. (2006). Working with information: Information management and culture in a professional services organization. *Journal of Information Science, 32*(6), 491-510.

Chu, C. C. (2007). *Police performance management*. Taoyuan: Central Police University.

Collins, P. A., & Gibbs, A. C. C. (2003). Stress in police officers: A study of the origins, prevalence and severity of stress-related symptoms within a county police force. *Occupational Medicine-Oxford, 53*, 256-264.

Cooper, M. D. (2000). Towards a model of safety culture. *Safety Science, 36*(2), 111-136.

Corbin, J., & Strauss, A. (1990). Grounded theory research: Procedures, canons, and evaluative criteria. *Qualitative Sociology, 13*(1), 3-21.

Crossan, M. M., Lane, H. W., & White, R. E. (1999). An organizational learning framework: From intuition to institution. *Academy of Management Review, 24*(3), 522-537.

Deschamps, F., Paganon-Badinier, I., Marchand, A.-C., & Merle, C. (2003). Sources and assessment of occupational stress in the police. *Journal of Occupational Health, 45*(6), 358-364.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment, 49*(1), 71-75.

Donaldson, L. (2006). The contingency theory of organizational design: Challenges and opportunities. In *Organization design* (pp. 19-40). Boston, MA: Springer.

Edgar, G. J., Stuart-Smith, R. D., Willis, T. J., Kininmonth, S., Baker, S. C., Banks, S., ... Thomson, R. J. (2014). Global conservation outcomes depend on marine protected areas with five key features. *Nature, 506*(7487), 216-220.

Eisenhardt, K. M. (1989). Building theories from case study research. *The Academy of Management Review, 14*(4), 532-550.

Oyen, E. (1990). *Comparative methodology—Theory and practice in international social research*. London: SAGE.

Emerson, K., Nabatchi, T., & Balogh, S. (2012). An integrative framework for collaborative governance. *Journal of Public Administration Research and Theory, 22*(1), 1-29.

Endsley, M. R. (1995). Toward a theory of situation awareness in dynamic systems. *Human Factors Journal, 37*(1), 32-64.

Fisher, G., & Aguinis, H. (2017). Using theory elaboration to make theoretical advancements. *Organizational Research Methods, 20*(3), 438-464.

Frederickson, H. G., Smith, K. B., Larimer, C. W., & Licari, M. J. (2012). *The public administration theory primer* (2nd ed.). New York: Routledge.

Fu, W., & Satish, P. (2014). The impact of caring climate, job satisfaction, and organizational commitment on job performance of employees in a China's insurance company. *Journal of Business Ethics, 124*, 339-349.

Ganster, D. C., & Rosen, C. C. (2013). Work stress and employee health: A multidisciplinary review. *Journal of Management, 39*(5), 1085-1122.

Ganster, D. C., & Schaubroeck, J. (1991). Work stress and employee health. *Journal of Management, 17*(2), 235-271.

Garbarino, S., Cuomo, G., Chiorri, C., & Magnavita, N. (2013). Association of work-related stress with mental health problems in a special police force unit. *BMJ Open, 3*(7), e002791.

Gershon, R. R., Lin, S., & Li, X. B. (2002). Work stress in aging police officers. *Journal of Occupational and Environmental Medicine, 44*, 160-167.

Getha-Taylor, H., Grayer, M. J., Kempf, R. J., & O'Leary, R. (2019). Collaborating in the absence of trust? What collaborative governance theory and practice can learn from the literatures of conflict resolution, psychology, and law. *American Review of Public Administration, 49*(1), 51-64.

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory—Strategies for qualitative research.* New Brunswick (U.S.A.), London (U.K.): Aldine Transaction.

Golembiewski, R. T., & Kim, B. S. (1990). Burnout in police work: Stressors, strain, and the phase model. *Police Studies, 13*, 74-80.

Gong, P. B. (1992). *Management*. Taipei: Sanmin.

Goodin, R. E., & Tilly, C. (2006). *The Oxford handbook of contextual political analysis*. Oxford: Oxford University Press.

Hackman, J. R., & Oldham, G. R. (1975). Development of the job diagnostic survey. *Journal of Applied Psychology, 60*, 159-170.

Han, J. (2017). Social marketisation and policy influence of third sector organisations: Evidence from the UK. *International Society for Third Sector Research, 28*, 1209-1225.

Harris, K. J., James, M., & Boonthanom, R. (2005), Perceptions of organizational politics and cooperation as moderators of the relationship between job strains and intent to turnover. *Journal of Managerial Issues, 10*(11), 26-42.

Hassan, M., Toylan, N. V., Semercioz, F., & Aksel, I. (2012). Interpersonal trust and its role in organizations. *International Business Research, 5*(8), 33-39.

Hauser, F. (2017). *Quality of public administration*. Publications Office of the European Union.

Houdmont, J., Cox, T., & Griffiths, A. (2010). Work-related stress case definitions and prevalence rates in national surveys. *Occupational Medicine, 60*(8), 658-661.

Huang, C. W., & Meng, W. D. (2018). *Police and crime prevention*. Taipei: Wunan.

Huang, C. W., Zhang, G. M., Liu, J. F., Hong, W. L., & Huang, W. Z. (2020). Paper presented at the *Meetings of the Police Policy Research Institute*. Central Police University.

Kelley, D. C., Siegel, E. H., & Wormwood, J. B. (2019). Understanding police performance under stress: Insights from the biopsychosocial model of challenge and threat. *Frontiers in Psychology, 10*, 1800.

Klijn, E. H., & Koppenjan, J. (2012). Governance network theory: Past, present and future. *Policy & Politics, 40*(4), 587-606.

Klijn, E. H., Edelenbos, J., & Steijn, B. (2010). Trust in governance networks: Its impacts on outcomes. *Administration and Society, 42*(2), 193-221.

Koschmann, M. A. (2012). The communicative constitution of collective identity in interorganizational collaboration. *Management Communication Quarterly, 26*(1), 139-146.

Kotzian, P. (2011). Conditional trust: The role of individual and system-level features for trust and confidence in institutions. *Zeitschrift für vergleichende Politikwissenschaft, 5*(1), 25-49.

Lank, E. (2006). *Collaborative advantage—How organization win by working together*. New York: Palgrave.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York, NY: Springer.

Lemieux, F. (2010). *The nature and structure of international police cooperation: An introduction*. Washington, DC: Georgetown University.

Lemieux, F. (2011). Investigating cyber security threats: Exploring national security and law enforcement perspectives. *Developing Cyber Security Synergy, 63*, 1-11.

Lemieux, F. (2015). Inside the global policing system: Liaison officers deployed in Washington, DC. *Global Governance: A Review of Multilateralism and International Organizations, 21*(1), 161-180.

Lemieux, F., & Bales, B. (2012). Cyber crime and intelligence-led policing. In search of a proactive investigation model. *Technocrime, 2*, 1-9.

Li, T. S. (2004). The effect and value of public-private partnership and contracting out: A proceeding governance reform job. *Journal of Public Administration, 12*, 41-77.

Lincoln, Y. S., & Guba, E. G. (1989). Ethics: The failure of positivist science. *Review of Higher Education, 12*(3), 221-240.

Lownders, V., & Skelther, C. (1998). The dynamics of multi-organizational partnerships: An analysis of changing modes of governance. *Public Administration, 76*(2), 313-333.

Luo, F., & Ruiz, J. (2012). Comparing police overwork in China and the USA: An exploratory study of death from overwork ("Karoshi") in policing. *International Journal of Police Science & Management, 14*(2), 177-198.

Manzoni, P., & Eisner, M. (2006). Violence between the police and the public: Influences of work-related stress, job satisfaction, burnout, and situational factors. *Criminal Justice and Behavior, 33*(5), 613-645.

Maslow, A. H. (1943). A theory of human motivation. *Psychological Review, 50*, 370-396.

Mcallister, D. J. (1995). Affect- and cognition-based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal, 38*(1), 24-59.

McCanlies, E. C., Gu, J. K., Andrew, M. E., & Violanti, J. M. (2018). The effect of social support, gratitude, resilience and satisfaction with life on depressive symptoms among police officers following Hurricane Katrina. *International Journal of Social Psychiatry, 64*(1), 63-72.

McCarty, W. P., Zhao, J. S., & Garland, B. E. (2007). Occupational stress and burnout between male and female police officers: Are there any gender differences? *Policing: An International Journal of Police Strategies and Management, 30*(4), 672-691.

McCreary, D. R., & Thompson, M. M. (2006). Development of two reliable and valid measures of stressors in policing: The operational and organizational police stress questionnaires. *International Journal of Stress Management, 13*(4), 494.

Meng, W. D. (2019). *Crime analysis and security governance*. Taipei: Wunan.

Miller, G. E., Rohleder, N., Stetler, C., & Kirschbaum, C. (2005). Clinical depression and regulation of the inflammatory response during acute stress. *Psychosomatic Medicine, 67*(5), 679-687.

Mitra, S., & Sambamoorthi, U. (2014). Disability prevalence among adults: Estimates for 54 countries and progress toward a global estimate. *Disability and Rehabilitation, 36*(11), 940-947.

Montwiłł, A., Kasińska, J., & Pietrzak, K. (2018). Importance of key phases of the ship manufacturing system for efficient vessel life cycle management. *Procedia Manufacturing, 19*, 34-41.

Murray, J., Hogan, R. J., Martin, D. E., Blahunka, K., Sancilio, F. D., Balyan, R., ... Tripp, R. A. (2021). Probenecid inhibits SARS-CoV-2 replication in vivo and in vitro. *Scientific Reports, 11*(1), 1-7.

Murray-Gibbons, R., & Gibbons, C. (2007). Occupational stress in the chef profession. *International Journal of Contemporary Hospitality Management, 19*(1), 32-42.

Nisar, S. K., Rasheed, M. I., & Qiang, W. (2018). They can't safeguard you when they are under stress: An exploratory study on issues and problems of job stress in police. *International Journal of Police Science & Management, 20*(2), 124-133.

Niu, W. Y. (2018). *Qualitative research methods and essay writing*. Taipei: Futaba.

Nixon, A. E., Mazzola, J. J., Bauer, J., Krueger, J. R., & Spector, P. E. (2011). Can work make you sick? A meta-analysis of the relationships between job stressors and physical symptoms. *Work and Stress, 25*(1), 1-22.

Nonaka, I., & Takeuchi, H. (1995). *The knowledge creating company*. New York: Oxford University Press.

Nyhan, R. C. (2000). Changing the paradigm: Trust and its role in public sector organizations. *American Review of Public Administration, 30*(1), 87-109.

Ohly, S., Sonnentag, S., & Pluntke, F. (2006). Routinization, work characteristics and their relationships with creative and proactive behaviors. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior, 27*(3), 257-279.

Ostrom, E. (2007). A diagnostic approach for going beyond panaceas. *Proceedings of the National Academy of Sciences, 104*(39), 15181-15187.

Palmer, D., & Warren, I. J. (2013). Global policing and the case of Kim Dotcom. *International Journal for Crime, Justice and Social Democracy, 2*(3), 105-119.

Paoline III, E. A. (2003). Taking stock: Toward a richer understanding of police culture. *Journal of Criminal Justice, 31*(3), 199-214.

Primecz, H., Romani, L., & Sackmann, S. (Eds.). (2011). *Cross-cultural management in practice: Culture and negotiated meanings*. Cheltenham: Edward Elgar Publishing Limited.

Qiu, H. Z. (2010). *Quantitative research and statistical analysis: SPSS (PASW) data analysis paradigm analysis*. Taipei: Wunan.

Queirós, C., Passos, F., Bártolo, A., Faria, S., Fonseca, S. M., Marques, A. J., … Pereira, A. (2020). Job stress, burnout and coping in police officers: Relationships and psychometric properties of the organizational police stress questionnaire. *International Journal of Environmental Research and Public Health, 17*(18), 1-19.

Queirós, C., Passos, F., Bártolo, A., Marques, A. J., da Silva, C. F., & Pereira, A. (2020). Burnout and stress measurement in police officers: literature review and a study with the operational police stress questionnaire. *Frontiers in Psychology, 11*, 587.

Rapkiewicz, A. V., Carsons, S. E., Pittaluga, S., Kleiner, D. E., Berger, J. S., Thomas, S., … Reynolds, H. R. (2020). Megakaryocytes and platelet-fibrin thrombi characterize multi-organ thrombosis at autopsy in COVID-19: A case series. *EClinical Medicine, 24*, 100434.

Rawls, J. (2009). *A theory of justice*. Cambridge: Harvard University Press.

Reichel, P. L. (2008). *Comparative criminal justice system: A topical approach* (5th ed.). Melbourne: Pearson Education.

Robertson, R. (1994). Globalisation or glocalisation? *The Journal of International Communication, 1*(1), 33-52.

Santos, V., Paes, F., Pereira, V., Arias-Carrión, O., Silva, A. C., Carta, M. G., … Machado, S. (2013). The role of positive emotion and contributions of positive psychology in depression treatment: Systematic review. *Clinical Practice and Epidemiology in Mental Health, 9*, 221-237.

Schmiedel, G. M. (2017). *Trust-based leadership*. Wiesbaden (Germany): Springer Gabler.

Schön, D. A. (1973). *Beyond the stable state: Public and private learning in a changing society*. Harmondsworth: Penguin Books.

Scott, W. R. (2005). Institutional theory: Contributing to a theoretical research program. *Great minds in Management: The Process of Theory Development, 37*(2), 460-484.

Sm ångs, M. (2010). Delinquency, social skills and the structure of peer relations: Assessing criminological theories by social network theory. *Social Forces, 89*(2), 609-631.

Sorrentino, M., Sicilia, M., & Howlett, M. (2018). Understanding co-production as a new public governance tool. *Policy and Society, 37*(3), 277-293.

Southwick, S. M., Bonanno, G. A., Masten, A. S., Panter-Brick, C., & Yehuda, R. (2014). Resilience definitions, theory, and challenges: Interdisciplinary perspectives. *European Journal of Psychotraumatology, 5*, 25338.

Stivers, C. (1991). Toward a feminist perspective in public administration theory. *Women & Politics, 10*(4), 49-65.

Teas, R. K., Walker, J. G., & Hughes, R. E. (1979). A path analysis of causes and consequences of salesmen's perceptions of role clarity. *Journal of Marketing Research, 16*, 335-369.

Tolbert, P. S., & Zucker, L. G. (1999). *The institutionalization of institutional theory*. London, Thousand Oaks, New Delhi: Studying Organization. Theory & Method.

Tsai, L. C. F., Nolasco, C. A. R., & Vaughn, M. S. (2018). Modeling job stress among police officers: Interplay of work environment, counseling support, and family discussion with co-workers. *Police Practice and Research, 19*(3), 253-269.

Tyagi, A., & Dhar, R. L. (2014). Factors affecting health of the police officials: Mediating role of job stress. *Policing: An International Journal of Police Strategies & Management, 37*(3), 649-664.

Ullah, F., Hussain, S., Alam, H., & Akhunzada, Z. U. (2016). Factors influencing police image in public (a study of university students' perception in KPK Pakistan). *Pakistan Journal of Criminology, 8*(3), 134.

Van Dooren, W., Bouckaert, G., & Halligan, J. (2010). *Performance management in the public sector*. London and New York: Routledge.

Vandenabeele, W. (2016). The mediating effect of job satisfaction and organizational commitment on self-reported performance: More robust evidence of the PSM-performance relationship. *International Review of Administrative Sciences, 75*(1), 11-38.

Vera, D., & Crossan, M. (2004). Strategic leadership and organizational learning. *Academy of Management Review, 29*(2), 222-240.

Vila, B. (2006). Impact of long work hours on police officers and the communities they serve. *American Journal of Industrial Medicine, 49*(11), 972-980.

Von Bertalanffy, L. (1973). The meaning of general system theory. In *General system theory: Foundations, development, applications* (pp. 30-53). New York: George Braziller Inc.

W.H.O. (2013). *Mental health.* Retrieved December 10, 2020 from www.who.int/mental_health/en/

Website of Coast Guard Administration (CGA). (2020). Retrieved from http://www.cga.gov.tw/

Wickramasinghe, V. (2010). Work-related dimensions and job stress: The moderating effect of coping strategies. *Stress and Health, 26*(5), 417-429.

Wilson, W. (1887). The study of administration. *Political Science Quarterly, 2*, 1-11.

Wu, T. M. (2018). *Marine disaster response and sustainable environment management in coast guard administration*. Taipei: Wunan.

Wu, T. M. (2020). *Ocean affairs governance and technology appkications practice*. Taipei: Wunan.

Xu, F. S. (2018). *Criminology and crime prevention*. Taipei: Angle.

Zeidner, M., Hadar, D., Matthews, G., & Roberts, R. D. (2013). Personal factors related to compassion fatigue in health professionals. *Anxiety, Stress & Coping, 26*(6), 595-609.

Zhang, G. M. (2016). *Police policy*. Taoyuan: Central Police University.