1



## RESEARCH ARTICLE

## The Relationship between Compassion Experienced by Social Workers and Job Performance: The Double Mediating Effect of Positive Psychological Capital and Affective Commitment

Sung-Hoon Ko<sup>1</sup>, In Ae Ryu<sup>2,\*</sup> and Yongjun Choi<sup>3</sup>

<sup>1</sup>Graduate School of Education, Kyonggi University, Korea, South <sup>2</sup>Department of Agronomy, Graduate School of Applied Animal Science, Wonkwang University, Korea, South <sup>3</sup>College of Business Administration, Hongik University, Korea, South

## Abstract:

## Background:

Compassion at work is integral for employees experiencing suffering in a wide range of contexts. Especially, it could be more critical for social workers who have relatively high levels of emotional demands. Thus, this current study aims to explore the mechanisms through how the experiences of compassion at work enhance social workers' job performance.

## Methods:

The participants were 356 social workers in South Korea. This study used a cross-sectional research design along with a self-report survey. Path analyses were used to test our hypotheses.

## Results:

Compassion was positively related to positive psychological capital, and positive psychological capital was also positively related to affective commitment and job performance. In addition, we found that effective commitment was positively related to job performance. Accordingly, positive psychological capital mediated the positive relationships between compassion and affective commitment as well as compassion and job performance. Furthermore, the serial multiple mediation effect of positive psychological capital and affective commitment on the relationship between compassion and job performance was significant.

## Conclusion:

Our findings suggest that social workers engaged in social welfare facilities build positive psychological capital through compassion and make an affective commitment to their work, eventually improving their job performance. Our findings provide practical insights for organizations, especially social welfare organizations, by shedding light on the importance of spreading an empathetic and positive organizational culture in enhancing social workers' job performance.

Keywords: Compassion, Positive psychological capital, Affective commitment, Job performance, Social workers, Positive psychology.

Article History	Received: August 2, 2021	Revised: November 23, 2021	Accepted: December 15, 2021

## 1. INTRODUCTION

Research on compassion has been used as a concept of compassion in the field of religious studies and has a long tradition in medicine, sociology, theology, and philosophy; however, the studies are limited, specifically in the field of business administration, and organizational behavior [1]. In terms of cognitive, emotional, and behavioral dimensions, compassion means not only the "high quality of connection" (HQC) with others but also the act of caring in response to the suffering of others. It is distinguished from other emotions in that it involves "Acts" [2, 3].

The compassion experienced by the members of the organization within the organization is responding to the material and psychological suffering experienced by their employees, subordinates, and superiors. In addition,

<sup>\*</sup> Address correspondence to this author at the Department of Agronomy, Graduate School of Applied Animal Science, Wonkwang University, Korea, South; E-mail: ria596009@gmail.com

compassion arises as a response to suffering induced in interpersonal relationships between coworkers and coworkers, and between bosses and subordinates. Suffering is defined as experiencing the pain that causes ontological bitterness and desolation [4]. Examples of such suffering include illness or injury, the death of a loved one, and trauma that may occur at work [5]. The empathy experienced by members is the key to caring and healing for other members of the organization who are in difficulties within the organization [2, 6].

Compassion is an emotion that suffers, feels, and experiences the pain of others as if it were one's own [7]. Wuthnow [6] states that compassion is the act of helping others altruistically, and that claims to induce positive emotion. Compassion is the display of an emotional state that expresses warmth, goodwill, and kindness, regardless of any motive [8]. Compassion is also a relational process that involves recognizing the suffering of others, empathizing with someone's emotional pain, and acting in any way to help alleviate or reduce the suffering [9].

Through compassionate behavior, members have positive emotions within the organization, and through positive emotions, they become motivated to immerse themselves in the work within the organization [7]. Compassion helps others in the organization to feel cared for or seen and to feel that they are not alone. In this way, compassion heals the organization. Dutton and his colleagues at the University of Michigan formed the Positive Organizational Scholarship (POS) in 2003 and have been actively researching compassion, positive emotion and identity, and job crafting. They conducted case studies to examine compassion, including a compassion scale [7]. Lilius et al. [7] empirically investigated the causal relationships among compassion, positive emotion, and affective commitment for the first time. Dutton et al. [10] revealed the relationship between virtue-a higher concept of compassion-and positive organizational identity (POI) through a qualitative study. Dutton et al. [11] explained the organization of compassion. Frost et al. [1] described the organization from the perspective of compassion through qualitative research.

Hur *et al.* [12] demonstrated the relationships between corporate social responsibility (CSR), compassion, and creativity. Moon *et al.* [13] revealed the causal relationship between compassion and positive work-related identity. Since Lilius *et al.* [7], research on the relationship between compassion and other outcome variables has been actively conducted in the field of business administration [12 - 16].

Unlike previous research on compassion in the field of business administration, this study examined the effect of compassion experienced by social workers in social welfare facilities on affective commitment and job performance through positive psychological capital. It examined the serial multiple mediation effect of positive psychological capital and affective commitment on the pathway from compassion experienced by social workers to their job performance.

This study shows that when social workers experience compassion in social welfare facilities, which are sites of suffering and healing, and exchange compassion with each other, they build positive psychological capital and improve their affective commitment and job performance. This study contributes toward opening social workers' eyes to see their customers as personal subjects who need their care if they experience compassion as an emotional response to suffering and form positive psychological capital. It also contributes toward understanding social workers in terms of creating an empathetic organizational culture through compassion and developing a positive organizational culture through the construction of positive psychological capital.

## 2. HYPOTHESES DEVELOPMENT

## 2.1. Compassion and Positive Psychological Capital

Historically, rationality has become a primary focus of organizational studies, and emotions at the workplace are issues that have been disregarded in OB studies [17 - 19]. Recently, there has been a growing school of thought that consideration of emotion and affect in organizations, rather than exclusive concentration on the rational and systematic perspectives to see organizations, contributes to organizational success. A shift from bounded rationality that underlines reasoning and decision making to bounded emotionality that emphasizes care, altruism, and compassion sheds new light on organizational studies. There are compelling practical reasons for scholars and practitioners to give more attention to emotional aspects, particularly compassion in the workplace.

Organizations are currently faced with a severe economic crisis and the highest unemployment rates in recent history, in addition to the scarcity of natural resources, intense competition, corporate downsizing, and an increase of threats to our natural environment. Correspondingly, employees within organizations suffer from many sources outside and within their respective organizations (i.e., natural disasters, humanmade disasters, personal tragedies, and job stressors) [11]. Cassell [20] defines suffering as a state of severe distress associated with events that threaten the intactness of the person at an individual, an organizational, and a national level. A serious level of suffering residing in an organization causes enormous financial, psychological, and social costs for organizations and their members [21]. Ignorance of employee's suffering is even costlier. As the "heart's response to others' suffering" [22], compassion plays an important role in organizational life by reducing or alleviating others' suffering or pain within labor organizations [1, 2, 9, 11]. Scholars widely agree that compassion involves sympathetic consciousness of others' distress and suffering and caring for those others often in communicative or behavioral ways. Kornfield [22] defines compassion as "the heart's response to sorrow" (p. 326). Kanov et al. [9] define compassion as a relational process of noticing another person's suffering, experiencing an emotional empathy for their pain, and behaving in some way that alleviates their pain.

Lilius *et al.* [7] report that there is a significant relationship between compassion and positive emotions experienced within an organization through an empirical study. In this respect, the compassion with authenticity experienced within the organization induces positive emotions in the personal and social identity of the organization members and plays a role in forming a positive psychological state among the organization members.

Cameron and Dutton [23] argued that compassion experienced within an organization improves its members' physical health and happiness, self-esteem or self-efficacy, and buffering function and resilience. They found that compassion can positively effect self-efficacy, self-esteem, and hope for the future and optimism, and strength resilience further.

Ko and Choi [14] argued that compassion significantly affected outcome variables by forming positive psychological capital among organizational members and that positive emotions elicited resources like self-efficacy, resilience, optimism, and hope. These are the resources through which an individual can overcome a negative state. An individual with lots of psychological resources can interpret an unfortunate event that occurs to him or her more positively, showing a willingness to solve it rather than falling into a negative state such as anxiety.

Organizational members who experience compassion tend to have hope and optimism, which are sub-dimensions of positive psychological capital [17, 24 - 27], and self-efficacy, which enables them to work with more confidence [28]. Organizational members who experience compassion tend to experience resilience, a sub-dimension of positive psychological capital, from stress, mental exhaustion, and excessive workload [8, 29 - 35].

Hypothesis 1. Compassion has a positive effect on positive psychological capital.

# 2.2. Positive Psychological Capital and Affective Commitment

Recent research on POB has revealed that organizational members with positive psychological capital like self-efficacy, hope, resilience, and optimism show higher productivity and performance than those without it. Youssef and Luthans [36] studied positive psychological capital and organizational members' attitudes and behaviors and confirmed that positive psychological capital has a positive effect on job satisfaction and happiness and organizational commitment.

Hatfield *et al.* [37] suggested that the positive emotions experienced by an individual can be transferred to other people in the organization, and that these emotions actually affect overall group effectiveness and satisfaction [38 - 40]. Weiss and Cropanzano [41], drawing on affective events theory (AET), asserted that emotions form the emotional factors of job satisfaction during job performance, thus indicating that workers who are satisfied with their lives have higher job satisfaction and performance than those who are not.

Hypothesis 2. Positive psychological capital has a positive effect on affective commitment.

## 2.3. Positive Psychological Capital and Job Performance

The literature shows that self-efficacy, which is a subdimension of positive psychological capital, affects job performance significantly depending on the extent of effort an organizational member puts into a specific task [28]. As a subdimension of positive psychological capital, hope and optimism help improve job performance because they are driving forces that help overcome difficulties like job stress and emotional exhaustion [36, 42]. Research has shown that as a sub-dimension of positive psychological capital, self-efficacy has a positive effect on various job-related performance variables [43] and that hope has a positive impact on performance variables like job performance, satisfaction, and attitude [36]. Research also revealed that organizational members with positive, optimistic thinking show higher job performance than those without it [44 - 47].

When organizational members in a company experience compassion, they experience self-efficacy, hope, optimism, and resilience, which are sub-dimensions of positive psychological capital, which eventually serve as a driving force to enhance job performance [43]. Empirical research has indicated that organizational members' hope and optimism significantly affect job performance [36], and self-efficacy and resilience help improve job performance among employees [28, 42].

Hypothesis 3. Positive psychological capital has a positive effect on job performance.

## 2.4. Affective Commitment and Job Performance

Members who are emotionally immersed in the organization tend to have a strong sense of belonging to and identify strongly with the organization, which increases their desire to engage members in organizational activities, achieve organizational goals, and remain in the organization [48]. Research has shown that affective commitment is related to turnover, absenteeism, and performance [49 - 53]. Affective commitment buffers side effects even when employees experience unfairness and unmet expectations while performing their jobs.

Employees with high affective commitment have a more tolerant attitude than those with low affective commitment even when the organization's wage increase is insufficient, having fewer negative effects on the organization [54]. The emotional attachment related to affective commitment affects the relationship between the employer and the employee and motivates organizational members to remain in the organization. When organizational members' basic needs and expectations are met, they show stronger emotional attachment to the organization than those whose basic needs and expectations remain unmet [55]. Emotionally immersed members exhibit positive behaviors while doing their work with a strong sense of belonging to the organization and the will and desire to devote themselves to it [56 - 58]. The higher the affective commitment, the more positive the job performance will be.

Hypothesis 4. Affective commitment has a positive effect on job performance.

## 2.5. Serial Multiple Mediation of Positive Psychological Capital and Affective Commitment

Lilius *et al.* [7] empirically found that compassion and positive emotion experienced within an organization influence each other significantly. Sincere compassion shared within the

organization induces positive feelings among organizational members and plays a role in forming a positive psychological state [15, 16, 59 - 62]. This has been confirmed in several studies that have demonstrated the causal relationship between compassion and positive variables. Davidson [63], confirming the relationship between compassion and positive emotion, argued that positive emotion helps secure psychological resources to reduce negative emotions like worries and anxiety.

As a sub-dimension of positive psychological capital, hope and optimism help improve affective commitment and job performance as they are the driving forces for overcoming work-related difficulties like job stress and emotional exhaustion [36, 42]. The literature has shown that as a subdimension of positive psychological capital, self-efficacy has a positive effect on various job-related performance variables [43, 64 - 66] and that hope has a positive effect on performance variables like job performance and satisfaction, and affective commitment [36]. Research has also shown that organizational members with positive, optimistic thinking showed higher job performance than those without it [44]. Therefore, this study established the following hypothesis that when social workers in a facility exchange compassion, an emotional response to the suffering of others, they form positive psychological capital, strengthen their affective commitment, and eventually improve their job performance [67, 68].

Hypothesis 5. Positive work-related identity and psychological capital have a serial multiple mediation effect on the relationship between compassion and job performance.

### **3. MATERIALS AND METHODS**

## 3.1. Research Model

This study empirically examined the serial multiple mediation effect of positive psychological capital and affective commitment on the pathway from compassion to job performance. Fig. (1) presents the research model.



Fig. (1). Research Model.

### 3.2. Participants and Procedure

A survey was employed to collect data. A total of 365 social workers were invited to take the survey. Excluding 9 surveys with incomplete or insincere responses, 356 surveys were used for statistical data analysis, indicating an effective response rate of 97.5%. The sample comprised 181 males

(50.8%) and 175 females (49.2%). Of them, 62 respondents (17.8%) were in their 20s, 130 (36.5%) were in their 30s, and 102 (28.7%) were in their 40s. By religion, non-religion represented the highest proportion (132 respondents, 37.1%), followed by Christianity (122, 34.3%) and Buddhism (54, 15.2%). A total of 169 respondents (47.5%) had graduated from a two-year college course and 140 (39.3%) from a four-year college course. Further, 177 (49.7%) respondents had a monthly income of less than 3 million Korean won. Most of the respondents (140; 39.3%) had 5 to 9 years' work experience, followed by 139 respondents (39.0%) with 1 to 4 years' experience.

#### 3.3. Measures

#### 3.3.1. Compassion

This study defined compassion as an emotional response to the suffering of others through action. Three items developed by Lilius *et al.* [7] were adapted to measure compassion: "I often experience compassion in social welfare facilities," "I often experience compassion from my boss in social welfare facilities," and "I often experience compassion from my coworkers in social welfare facilities." The items were rated on a 5-point Likert scale and the Cronbach's alpha of compassion was  $\alpha$ =.784.

## 3.3.2. Positive Psychological Capital

This study defined positive psychological capital as hope, self-efficacy, optimism, and resilience formed through compassion experienced by organizational members while working. A total of 24 question items developed and used by Youssef and Luthans [36] and Luthans *et al.* [31] were adapted to measure positive psychological capital (*e.g.*, "I can devise many ways to overcome difficulties in social welfare facilities when I face them," "I overcome frustration and hopelessness in social welfare facilities when I face them," and "I do not experience much difficulty while recovering"). The items were rated on a 5-point Likert scale, and the Cronbach's alpha of positive psychological capital was  $\alpha$ =.892.

## 3.3.3. Affective Commitment

Drawing on emotional attachment presented by Meyer and Allen [50], this study defined affective commitment as the degree of attachment that an individual identifies with, participates in, and feels strongly toward the organization. Five question items developed by Allen and Meyer [69] were adapted to measure affective commitment (*e.g.*, "I feel emotionally attached to my work when I work," "I feel like the work of our institution is my own," and "I have a strong sense of belonging to my institution I work for when I work"). The items were rated on a 5-point Likert scale. The Cronbach's alpha of this construct of affective commitment was  $\alpha$ =.770.

#### 3.3.4. Job Performance

This study defined job performance as the degree to which one performs the job in charge accurately and responsibly. Five items developed by Williams and Anderson [70] were used to measure job performance (*e.g.*, "I fulfill the responsibilities specified in my job while working in social welfare facilities" and "I tend to perform well in work expected of the organization while working in social welfare facilities"). The items were rated on a 5-point Likert scale, and the Cronbach's alpha of job performance was  $\alpha$ =.821.

## 4. RESULTS AND DISCUSSION

## 4.1. Confirmatory Factor Analysis

The results of the confirmatory factor analysis (CFA) were as follows:  $\chi^2(500)=942.138$ ; *p*<.001. The latent variables'

## Table 1. Confirmatory factor analysis results.

measurement items used in this study satisfied the traditional criteria. All values from the CFA were satisfactory [71], as shown in Table 1.

## 4.2. Correlation Analysis

This study employed both Pearson correlation and regression analyses to test multicollinearity. The results showed that all the variance inflation factor values (VIFs) ranged between 1.338 and 1.714, confirming that multicollinearity was not a serious issue. Table 2 presents the results of the correlation analysis.

Construct	Items	λ	SE	CR	Cronbach's α	AVE	CR
Compassion	Com1	.685	-	-		.703	.873
	Com2	.657	.087	11.439	.784		
	Com3	.920	.107	12.497			
	PsyCapital1	.655	-	-			.821
	PsyCapital2	.688	.090	11.431			
	PsyCapital3	.651	.088	10.891			
	PsyCapital4	.668	.088	11.125			
	PsyCapital5	.645	.087	10.829			
	PsyCapital6	.642	.077	10.780			
	PsyCapital7	.656	.079	11.045			
	PsyCapital8	.660	.083	11.080	7	.892 .652	
	PsyCapital9	.479	.084	8.278			
Positive	PsyCapital10	.627	.086	10.572			
Psychological	PsyCapital11	.674	.081	11.243	.892		
Capital	PsyCapital12	.592	.083	10.085	1		
	PsyCapital13	.545	.087	9.331			
	PsyCapital15	.489	.082	8.482			
	PsyCapital16	.508	.084	8.748			
	PsyCapital18	.468	.087	8.111			
	PsyCapital20	.533	.078	9.136			
	PsyCapital21	.439	.086	7.629			
	PsyCapital22	.443	.086	7.696			
	PsyCapital23	.616	.099	10.408	1		
	PsyCapital24	.545	.094	9.320	7		
	AC1	.675	-	-		.664	.863
1.00 ···	AC2	.472	.109	8.002	7		
Affective Commitment	AC3	.741	.102	11.569	.770		
Communent	AC4	.767	.092	12.301	-		
	AC5	.635	.088	10.199			
	JP1	.711	-	-	.821 .615		1
	JP2	.763	.088	12.744			
Job Performance	JP3	.699	.097	11.811		.615	.888
	JP4	.686	.093	11.602			
	JP5	.623	.101	10.615			

#### 6 The Open Psychology Journal, 2022, Volume 15

## Table 2. Construct means, standard deviations, and correlations.

	1	2	3	4
1. Compassion	.838			
2. PsyCapital	.376**	.807		
3. Affective Commitment	.405**	.582**	.814	
4. Job Performance	.288**	.521**	.417**	.784
Mean	3.718	3.528	3.561	3.795
SD	.655	.440	.599	.617
Max	5.00	5.00	5.00	5.00
Min	1.00	2.42	1.20	2.20

Note: \*\*p<01, The numbers in placed diagonally are the square roots of the AVE, Positive Psychological Capital = Psy Capital.

#### Table 3. Path analysis results.

Hypothesis	Path	b	SE	CR	Р	Test
Hypothesis 1	$Compassion \rightarrow PsyCapital$	.253	.033	7.643	p<.001	Accept
Hypothesis 2	$PsyCapital \rightarrow AC$	.793	.059	13.502	p<.001	Accept
Hypothesis 3	$PsyCapital \rightarrow JP$	.572	.077	7.437	p<.001	Accept
Hypothesis 4	$AC \rightarrow JP$	.178	.056	3.145	p<.01	Accept

Note: \*\*\*p<.001, \*\*p<.01 Positive Psychological Capital = PsyCapital, Affective Commitment = AC, Job Performance = JP.

#### Table 4. Indirect effects for the serial multiple mediation effects (positive psychological capital and affective commitment).

	Effect	LLCI95%	ULCI95%	BootSE
Total indirect effect	.2007	.1114	.3202	.0526
Compassion -> PsyCapital -> JP	.1498	.0810	.2360	.0394
Compassion -> AC -> JP	.0280	.0051	.0595	.0140
Compassion -> PsyCapital -> AC -> JP	.0230	.0045	.0485	.0113

Note: Positive Psychological Capital = Psy Capital, Affective Commitment = AC, Job Performance = JP.

### 4.3. Hypotheses Testing

After removing items that showed a high correlation or very low factor load ( $\lambda$ ) based on the CFA results, the following were selected for structural equation modeling in order to test the hypotheses: 3 items to measure compassion, 21 items to measure positive psychological capital, 5 items to measure affective commitment, and 5 items to measure job performance. Table **3** presents the results of the structural equation modeling, supporting Hypotheses 1 through 4.

## 4.4. Serial Multiple Mediation Effect of Positive Psychological Capital and Affective Commitment on the Relationship between Compassion and Job Performance

This study employed the PROCESS bootstrap sampling to test the significance of the mediating effect [72, 73]. This method has been used widely to overcome the limitations of conventional approaches (*e.g.*, regression analysis). Bootstrapping helps judge whether the indirect effect is statistically significant (CI95%=LLCI value, ULCI value). As seen in Table 4, the indirect effect between compassion and job performance turned out to be between LLCI<sub>95</sub>=0.0045 and ULCI<sub>95</sub>=0.0485, confirming the significance of the serial multiple mediation effect of positive psychological capital and affective commitment, thus supporting Hypothesis 5.

#### CONCLUSION

This study empirically found that compassion experienced by social workers as an emotional response to mental, physical, and material suffering formed positive psychological capital and significantly enhanced affective commitment and job performance. The findings supported all the hypotheses framed in the study, including the serial multiple mediation effect of positive psychological capital and affective commitment. When social workers exchange compassion with each other, they build positive psychological capital in the form of hope, optimism, self-efficacy, and resilience around their work, which eventually enhances their job performance.

## IMPLICATIONS

First, this study is different from previous studies in that it demonstrates the serial multiple mediation effects of positive psychological capital and affective commitment on the relationship between compassion and job performance with data from social workers. Ko and Choi [14] demonstrated the mediation effect of positive psychological capital on the pathway from compassion to job performance with organizational members within a company. They verified the serial multiple mediation effect of positive work-related identity (PWRI) and collective self-esteem (CSE) on the pathway from compassion to job performance. However, unlike Ko and Choi [14], this study examined the serial multiple mediation effect of positive psychological capital and affective commitment on the pathway from compassion to job performance among social workers.

Second, the existing research on compassion has mainly focused on the mediation effect of positive emotions on the pathway from compassion to affective commitment [7], to collective pride [14], and to PWRI [74]. Moon *et al.* [13] empirically demonstrated the mediation effect of PWRI on the pathway from compassion to performance variables. Ko and Choi [14] examined the mediation effect of positive psychological capital on the pathway between compassion and job performance. Rhee *et al.* [75] verified the moderating effect of compassion and self-efficacy on the relationship between rudeness and job performance. However, the current study quantitatively demonstrated the causal relationships between compassion experienced by social workers and positive psychological capital, affective commitment, and job performance.

Third, this study has a practical implication for improving social workers' empathy levels by providing compassion as an act of temporal, material, and mental care for those struggling with excessive workloads and job stress. This study shows that compassion serves as a buffer for social workers at the individual level as it helps them have hope for the future, optimism, self-efficacy, and resilience [9, 76].

Finally, this study has a practical implication for forming an empathetic and positive organizational culture by building resilience and positive psychological capital through compassion experienced by social workers exposed to sufferings at the workplace. This study also opens up an avenue for social workers who have improved their sense of empathy through compassion, through which they can treat their customers with subjectivity rather than objectivity.

## LIMITATIONS AND FUTURE RESEARCH

First, this study is a cross-sectional one in which samples were collected at a certain point in time. Compassion experienced by social workers, positive psychological capital, and affective commitment are formed and maintained over a considerable period of time, and therefore a longitudinal approach can help derive more valid findings [77].

Second, the findings of this study cannot be generalized as the sample data were collected from social workers in social welfare facilities located in Seoul and Gyeonggi-do in Korea alone. Future research should compare countries in order to validate the significance of the relationships between compassion experienced by social workers and other outcome variables. While compassion is a human emotion that responds to suffering, it may differ from country to country in terms of degree.

Third, this study used data from social workers and empirically examined the causal relationships among compassion, positive psychological capital, affective commitment, and job performance for the first time in the field of social science. Future research should continue to quantitatively investigate the causal relationships between positive variables like positive emotion, psychological capital, and work-related identity and performance variables.

Finally, the scales employed may be a limitation for future research to overcome by securing their validity. This study used a three-item scale developed by Lilius *et al.* [7] to measure compassion. Empirical research on compassion has been conducted regularly [7, 13, 14, 74], but future empirical research on the relationship between compassion and outcome variables should be accompanied by the development of more accurate scales through a mixed method comprising qualitative and quantitative approaches.

## ETHICS APPROVAL AND CONSENT TO PARTICIPATE

The survey did not identify specific individuals, and the participation was voluntary. Thus, no ethics approval was required.

## HUMAN AND ANIMAL RIGHTS

Not applicable.

## CONSENT FOR PUBLICATION

Consent form has been obtained from the study participants.

### STANDARDS OF REPORTING

STROBE guidelines have been followed.

## AVAILABILITY OF DATA AND MATERIALS

The data used in this study are available upon request from the corresponding author.

#### FUNDING

None.

## CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

## ACKNOWLEDGEMENETS

Declared none.

## REFERENCES

- Frost PJ, Dutton JE, Maitlis S, Lilius JM, Kanov JM, Worline MC. Seeing organizations differently: Three lenses on compassion. The Sage Handbook of Organization Studies 2006; 2: 843-66.
- [2] Dutton JE, Frost PJ, Worline MC, Lilius JM, Kanov JM. Leading in times of trauma. Harv Bus Rev 2002; 80(1): 54-61, 125. [PMID: 12964467]
- [3] Solomon RC. The moral psychology of business: Care and compassion in the corporation. Bus Ethics Q 1998; 8(3): 515-33. [http://dx.doi.org/10.2307/3857435]
- [4] Reich WT. Speaking of suffering: A moral account of compassion. Soundings 1989; 72(1): 83-108.[PMID: 11653862]
- [5] Lim D, DeSteno D. Suffering and compassion: The links among adverse life experiences, empathy, compassion, and prosocial behavior. Emotion 2016; 16(2): 175-82. [http://dx.doi.org/10.1037/emo0000144] [PMID: 26751630]
- [6] Wuthnow R. Acts of compassion: caring for others and helping
- ourselves. Princeton, NJ: Princeton University Press 1991.
- [7] Lilius JM, Worline MC, Maitlis S, Kanov J, Dutton JE, Frost P. The

contours and consequences of compassion at work. J Organ Behav 2008: 29(2): 193-218.

[http://dx.doi.org/10.1002/job.508]

- [8] Kahn WA. Caring for the caregivers: Patterns of organizational caregiving. Adm Sci Q 1993; 38(4): 539-63. [http://dx.doi.org/10.2307/2393336]
- [9] Kanov JM, Maitlis S, Worline MC, Dutton JE, Frost PJ, Lilius JM. Compassion in organizational life. Am Behav Sci 2004; 47(6): 808-27. [http://dx.doi.org/10.1177/0002764203260211]
- [10] Dutton JE, Roberts LM, Bednar J. Pathways for positive identity construction at work: Four types of positive identity and the building of social resources. Acad Manage Rev 2010; 35(2): 265-93.
- [11] Dutton JE, Worline MC, Frost PJ, Lilius J. Explaining compassion organizing. Adm Sci Q 2006; 51(1): 59-96. [http://dx.doi.org/10.2189/asqu.51.1.59]
- [12] Hur WM, Moon TW, Ko S-H. How employees' perceptions of CSR increase employee creativity: Mediating mechanisms of compassion at work and intrinsic motivation. J Bus Ethics 2018; 153(3): 629-44. [http://dx.doi.org/10.1007/s10551-016-3321-5]
- [13] Moon TW, Hur WM, Ko S-H, Kim JW, Yoo DK. Positive workrelated identity as a mediator of the relationship between compassion at work and employee outcomes. Hum Factors Ergon Manuf 2016; 26(1): 84-94.
  - [http://dx.doi.org/10.1002/hfm.20615]
- Ko SH, Choi Y. Compassion and job performance: Dual-paths through [14] positive work-related identity, collective self-esteem, and positive psychological capital. Sustainability (Basel) 2019; 11(23): 6766. [http://dx.doi.org/10.3390/su11236766]
- Ko SH, Choi Y. Positive leadership and organizational identification: [15] Mediating roles of positive emotion and compassion. Probl Perspect Manag 2021: 19(1): 13-23.
- [http://dx.doi.org/10.21511/ppm.19(1).2021.02]
- [16] Ko SH, Kim J, Choi Y. Compassion and Workplace Incivility: Implications for Open Innovation. J Open Innov 2021; 7(1): 95. [http://dx.doi.org/10.3390/joitmc7010095]
- [17] Ashkenasy W. Behavior in organizations as emotion management: Past and present. In: Mastenbroek Hartel, Zerbe, Ed. Emotions in the workplace: Theory, research, and practice. Quorum: Westport. CT 2000; pp. 60-74.
- [18] Muchinsky P. Emotions in the workplace: The neglect of organizational behavior. J Organ Behav 2000; 21(7): 801-5. [http://dx.doi.org/10.1002/1099-1379(200011)21:7<801::AID-JOB999 >3.0.CO;2-A]
- Taylor FW. The principles of scientific management. New York: [19] Harper & Brothers 1911.
- [20] Cassell EJ. The nature of suffering and the goals of medicine. Loss Grief Care 1998; 8(1-2): 129-42.
- [http://dx.doi.org/10.1300/J132v08n01\_18]
- [21] Frost PJ. Toxic emotions at work: How compassionate managers handle pain and conflict. Boston, MA: Harvard Business School Press 2003
- [22] Kornfield J. A path with heart. New Yotk: Bantam Books 1993.
- [23] Cameron K, Dutton J. Positive organizational scholarship: Foundations of a new discipline. San Francisco: Berrett-Koehler Publishers 2003.
- [24] Rego A, Ribeiro N, Cunha MP, Jesuino JC. How happiness mediates the organizational virtuousness and affective commitment relationship. J Bus Res 2011: 64(5): 524-32. [http://dx.doi.org/10.1016/j.jbusres.2010.04.009]
- [25] Hu Y, Wu X, Zong Z, et al. Authentic leadership and proactive behavior: The role of psychological capital and compassion at work. Front Psychol 2018; 9: 2470.
- [http://dx.doi.org/10.3389/fpsyg.2018.02470] [PMID: 30618919] [26] Sabaitytė E, Diržytė A. Psychological capital, self-compassion, and life satisfaction of unemployed youth. International Journal of Psychology: A Biopsychosocial Approach 2016; 19: 49-69.
- [27] Woo CH, Kim C. Impact of workplace incivility on compassion competence of Korean nurses: Moderating effect of psychological capital. J Nurs Manag 2020; 28(3): 682-9.
- [http://dx.doi.org/10.1111/jonm.12982] [PMID: 32072694] Bandura A, Locke EA. Negative self-efficacy and goal effects [28] revisited. J Appl Psychol 2003; 88(1): 87-99.
- [http://dx.doi.org/10.1037/0021-9010.88.1.87] [PMID: 12675397] [29] Luthans F, Avey JB, Avolio BJ, Norman SM, Combs GM. Psychological capital development: Toward a micro-intervention. J Organ Behav 2006; 27(3): 387-93. [http://dx.doi.org/10.1002/job.373]

Kanov J, Powley EH, Walshe ND. Is it ok to care? How compassion [30] falters and is courageously accomplished in the midst of uncertainty. Hum Relat 2017; 70(6): 751-77. [http://dx.doi.org/10.1177/0018726716673144]

- Luthans F, Avolio BJ, Avey JB, Norman SM. Positive psychological [31] capital: Measurement and relationship with performance and satisfaction. Person Psychol 2007; 60(3): 541-72. [http://dx.doi.org/10.1111/j.1744-6570.2007.00083.x]
- [32] Luthans F, Avey JB, Patera JL. Experimental analysis of a web-based training intervention to develop positive psychological capital. Acad Manag Learn Educ 2008; 7(2): 209-21. [http://dx.doi.org/10.5465/amle.2008.32712618]
- [33] Luthans F, Avey JB, Avolio BJ, Peterson SJ. The development and resulting performance impact of positive psychological capital. Hum Resour Dev Q 2010; 21(1): 41-67. [http://dx.doi.org/10.1002/hrdq.20034]
- [34] Avey JB, Luthans F, Smith RM, Palmer NF. Impact of positive psychological capital on employee well-being over time. J Occup Health Psychol 2010; 15(1): 17-28.

[http://dx.doi.org/10.1037/a0016998] [PMID: 20063956]

- [35] Avey JB, Reichard RJ, Luthans F, Mhatre KH. Meta-analysis of the impact of positive psychological capital on employee attitudes, behaviors, and performance. Hum Resour Dev Q 2011; 22(2): 127-52. [http://dx.doi.org/10.1002/hrdq.20070]
- [36] Youssef CM, Luthans F. Positive organizational behavior in the workplace: The impact of hope, optimism, and resilience. J Manage 2007; 33(5): 774-800. [http://dx.doi.org/10.1177/0149206307305562]
- [37] Hatfield E, Cacioppo JT, Rapson RL. Emotional contagion. Curr Dir Psychol Sci 1993; 2(3): 96-100.
- [http://dx.doi.org/10.1111/1467-8721.ep10770953]
- [38] George JM, Brief AP. Feeling good-doing good: A conceptual analysis of the mood at work-organizational spontaneity relationship. Psychol Bull 1992; 112(2): 310-29.
  - [http://dx.doi.org/10.1037/0033-2909.112.2.310] [PMID: 1454897]
- [39] Rego P, Lopes MP, Nascimento JL. Authentic leadership and organizational commitment: The mediating role of positive psychological capital. J Ind Eng Manag 2016; 9(1): 129-51. [http://dx.doi.org/10.3926/jiem.1540]
- [40] Jang J, Tak J. The effects of positive psychological capital, learning goal orientation, articulating a vision on affective commitment to organizational change: The moderating effects of benefits of change, organizational cynicism. Korean J Indust Organ Psychol 2013; 26(1): 1-25.

[http://dx.doi.org/10.24230/kjiop.v26i1.1-25]

- [41] Weiss HM, Cropanzano R. Affective Events Theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work. In: B.M. Staw, L.L. Cummings, Eds. Research in Organizational Behavior: An Annual Series of Analytical Essays and Critical Reviews. JAI Press 1996; 18: pp. 1-74.
- Seligman MEP. Positive psychology, positive prevention, and positive [42] therapy.Handbook of Positive Psychology. New York: Wiley 2002; pp. 3-9.
- [43] Stajkovic AD, Luthans F. Self-efficacy and work-related performance: A meta- analysis. Psychol Bull 1998; 124(2): 240-61. [http://dx.doi.org/10.1037/0033-2909.124.2.240]
- [44] Seligman ME, Schulman P. Explanatory style as a predictor of productivity and quitting among life insurance sales agents. J Pers Soc Psychol 1986; 50(4): 832-8.

[http://dx.doi.org/10.1037/0022-3514.50.4.832]

Durrah O, Alhamoud A, Khan K. Positive psychological capital and [45] job performance: The mediating role of job satisfaction. Int Sci Res J 2016; 72(7): 214-25.

[http://dx.doi.org/10.21506/j.ponte.2016.7.17]

Sweetman D, Luthans F, Avey JB, Luthans BC. Relationship between [46] positive psychological capital and creative performance. Can J Adm Sci 2011; 28(1): 4-13.

[http://dx.doi.org/10.1002/cjas.175]

[47] Chen SL. The relationship of leader psychological capital and follower psychological capital, job engagement and job performance: A multilevel mediating perspective. Int J Hum Resour Manage 2015; 26(18): 2349-65 [http://dx.doi.org/10.1080/09585192.2015.1020443]

[48] Rhoades L, Eisenberger R, Armeli S. Affective commitment to the

organization: The contribution of perceived organizational support. J Appl Psychol 2001; 86(5): 825-36. [http://dx.doi.org/10.1037/0021-9010.86.5.825] [PMID: 11596800]

- [49] Mathieu JE, Zajac DM. A review and meta-analysis of the antecedents, correlates, and consequences of organizational commitment. Psychol Bull 1990; 108(2): 171-94. [http://dx.doi.org/10.1037/0033-2909.108.2.171]
- [50] Meyer JP, Allen NJ. A longitudinal analysis of the early development and consequences of organizational commitment. Can J Behav Sci 1987; 19(2): 199-215. [http://dx.doi.org/10.1037/h0080013]
- [51] Meyer JP, Paunonen SV, Gellatly IR, Goffin RD, Jackson DN. Organizational commitment and job performance: It's the nature of the commitment that counts. J Appl Psychol 1989; 74(1): 152-6. [http://dx.doi.org/10.1037/0021-9010.74.1.152]
- [52] Arshadi N, Hayavi G. The effect of perceived organizational support on affective commitment and job performance: Mediating role of OBSE. Procedia Soc Behav Sci 2013; 84: 739-43. [http://dx.doi.org/10.1016/j.sbspro.2013.06.637]
- [53] Koo B, Yu J, Chua BL, Lee S, Han H. Relationships among emotional and material rewards, job satisfaction, burnout, affective commitment, job performance, and turnover intention in the hotel industry. J Qual Assur Hosp Tour 2020; 21(4): 371-401. [http://dx.doi.org/10.1080/1528008X.2019.1663572]
- [54] DeCotiis TA, Summers TP. A path analysis of a model of the antecedents and consequences of organizational commitment. Hum Relat 1987; 40(7): 445-70. [http://dx.doi.org/10.1177/001872678704000704]
- [55] Meyer JP, Allen NJ, Smith CA. Commitment to organizations and occupations: Extension and test of a three-component conceptualization. J Appl Psychol 1993; 78(4): 538-51. [http://dx.doi.org/10.1037/0021-9010.78.4.538]
- [56] Chang PC, Chen SJ. Crossing the level of employee's performance: HPWS, affective commitment, human capital, and employee job performance in professional service organizations. Int J Hum Resour Manage 2011; 22(4): 883-901. [http://dx.doi.org/10.1009/00555122.2011.555120]
- [http://dx.doi.org/10.1080/09585192.2011.555130]
- [57] Van Scotter JR. Relationships of task performance and contextual performance with turnover, job satisfaction, and affective commitment. Hum Resour Manage Rev 2000; 10(1): 79-95. [http://dx.doi.org/10.1016/S1053-4822(99)00040-6]
- [58] Rowold J, Borgmann L, Bormann K. Which leadership constructs are important for predicting job satisfaction, affective commitment, and perceived job performance in profit versus nonprofit organizations? Nonprofit Manag Leadersh 2014; 25(2): 147-64. [http://dx.doi.org/10.1002/nml.21116]
- [59] Chu LC. Mediating positive moods: the impact of experiencing compassion at work. J Nurs Manag 2016; 24(1): 59-69. [http://dx.doi.org/10.1111/jonm.12272] [PMID: 25510420]
- [60] Lilius JM, Kanov JM, Dutton JE, Worline MC, Maitlis S. Compassion revealed: what we know about compassion at work (and where we still need to know more). The Handbook of Positive Organizational Scholarship. New York: Oxford University Press 2012; pp. 273-87.
- [61] Condon P, Feldman Barrett L. Conceptualizing and experiencing compassion. Emotion 2013; 13(5): 817-21.
  [http://dx.doi.org/10.1037/a0033747] [PMID: 23914766]
- [62] Ko S, Choi Y. The effects of compassion experienced by SME employees on affective commitment: Double-mediation of authenticity and positive emotion. Management Science Letters 2020; 10(6): 1351-8. [http://dx.doi.org/10.5267/j.msl.2019.11.022]

[63] Davidson RJ. Toward a biology of positive affect and compassion. Visions of compassion: Western scientists and Tibetan Buddhists examine human nature. London: Oxford University Press 2002; pp. 107-30.

[http://dx.doi.org/10.1093/acprof:oso/9780195130430.003.0006]

- [64] Luthans F, Avolio BJ, Walumbwa FO, Li W. The psychological capital of Chinese workers: Exploring the relationship with performance. Manage Organ Rev 2005; 1(2): 249-71. [http://dx.doi.org/10.1111/j.1740-8784.2005.00011.x]
- [65] Taştan SB. Psychological capital: A positive psychological resource and its relationship with creative performance behavior. Anadolu Universitesi Sosyal Bilimler Dergisi 2016; 16(2): 101-18. [http://dx.doi.org/10.18037/ausbd.389199]
- [66] Baig SA, Iqbal S, Abrar M, et al. Impact of leadership styles on employees' performance with moderating role of positive psychological capital. *Total*. Qual Manag Bus 2019; 32(9-10): 1-21.
- [67] Rifai HA. A test of the relationships among perceptions of justice, job satisfaction, affective commitment and organizational citizenship behavior. Gadjah Mada International Journal of Business 2005; 7(2): 131-54.

[http://dx.doi.org/10.22146/gamaijb.5574]

- [68] Riketta M. Attitudinal organizational commitment and job performance: A meta□ analysis. J Organ Behav 2002; 23(3): 257-66. [http://dx.doi.org/10.1002/job.141]
- [69] Allen NJ, Meyer JP. The measurement and antecedents of affective, continuance and normative commitment to the organization. J Occup Psychol 1990; 63(1): 1-18. [http://dx.doi.org/10.1111/j.2044-8325.1990.tb00506.x]
- [70] Williams LJ, Anderson SE. Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. J Manage 1991; 17(3): 601-17. [http://dx.doi.org/10.1177/014920639101700305]
- [71] Fornell C, Larcker DF. Evaluating structural equation models with unobservable variables and measurement error. J Mark Res 1981; 18(1): 39-50.
  [http://dx.doi.org/10.1177/002224378101800104]
- [72] Preacher KJ, Hayes AF. SPSS and SAS procedures for estimating indirect effects in simple mediation models. Behav Res Methods Instrum Comput 2004; 36(4): 717-31. [http://dx.doi.org/10.3758/BF03206553] [PMID: 15641418]
- [73] Preacher KJ, Hayes AF. Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. Behav Res Methods 2008; 40(3): 879-91.

[http://dx.doi.org/10.3758/BRM.40.3.879] [PMID: 18697684]

- [74] Hur WM, Moon T, Rhee SY. Exploring the relationships between compassion at work, the evaluative perspective of positive workrelated identity, service employee creativity, and job performance. J Serv Mark 2016; 30(1): 103-14. [http://dx.doi.org/10.1108/JSM-05-2014-0180]
- [75] Rhee SY, Hur WM, Kim M. The relationship of coworker incivility to job performance and the moderating role of self-efficacy and compassion at work: The job demands-resources (JD-R) approach. J Bus Psychol 2017; 32(6): 711-26. [http://dx.doi.org/10.1007/s10869-016-9469-2]

[76] Dutton JE, Workman KM. Commentary on 'Why Compassion Counts!': Compassion as a generative force. J Manage Inq 2011; 20(4): 402-6.

- [http://dx.doi.org/10.1177/1056492611421077]
- [77] Stutts LA, Leary MR, Zeveney AS, Hufnagle AS. A longitudinal analysis of the relationship between self-compassion and the psychological effects of perceived stress. Self Ident 2018; 17(6): 609-26.

[http://dx.doi.org/10.1080/15298868.2017.1422537]

#### © 2022 Ko et al.

This is an open access article distributed under the terms of the Creative Commons Attribution 4.0 International Public License (CC-BY 4.0), a copy of which is available at: https://creativecommons.org/licenses/by/4.0/legalcode. This license permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.