

## **Environmental Workspace Quality and Employees’ Organizational Citizenship Behavior – Mediation Mechanism through Perceived Organizational Support**

**Afshan Javaid**

Independent Researcher

Email: afshanjavaid123@gmail.com

**Muhammad Faheem Akram**

Jinnah Islamia College of Commerce, Lahore

### **Abstract**

With the changing working requirements, the focus has shifted to a physical working environment and how do influences employees’ outcomes. Considering the need for the study and taking social exchange as the underpinning theory, the current study aims to investigate the influences of environmental workspace quality on organizational citizenship behavior through perceptions of organizational support. A cross-sectional quantitative study design has been used to elicit the questionnaire-based responses. For analysis purposes, 204 filled questionnaires were used. Data analysis covers validity, correlation, and reliability. The study's findings reveal that environmental quality is positively related to OCB, while POS partially mediates this relationship. This study has some limitations where is the foremost is the selection of a sample from only one university. The result of this investigation can provide guidelines to the leader of an organization in Pakistan that focuses on areas/services that employees believe have low satisfaction and high importance.

**Keywords:** Environmental Workspace Quality, Organizational Citizenship Behavior, Social Exchange Theory, Environmental Psychology, Perceived Organizational support.

## Introduction

An employee has to interact with the physical and non-physical environment of business, and a supportive environment can influence the way employees to work. A physical environment comprises various elements size, layout, furnishings, facilities, and location (Seong, 2020). Out of various environmental aspects, the physical environment is considered an essential perspective. As for employees, the first interaction is the physical environment what they think about the organization environment. Therefore, employees' perspective affects the overall image of the organization (Burr, 2021). It observed that the working environment could influence employees' attitudinal and behavioral outcomes at micro and overall organizational performance at a macro level. (Galanti et al., 2021; Kim & Choi, 2017).

Researchers have begun to concentrate on indoor work settings encompassing office design (Davis et al., 2020; Wohlers & Hertel, 2017), privacy, flexibility (Morrison and Macky, 2017), and workspace comfort (Kim & de Dear, 2013; Vischer, 2008), focusing on these factors help to understand the attitude of employees' work. It is also worth mentioning that employees working in the sick and unhealthy environment may have negative effects on their work and non-work life (Redman et al., 2011).

While talking about job-related outcomes, past studies have observed that it increases employees' job satisfaction, commitment, engagement, performance, and productivity (e.g. Ashkanasy et al., 2014; Elsbach & Pratt, 2007; Okuyucu et al., 2021; Sadewo et al., 2021; Said & El-Shafei, 2021; Vischer, 2007), but how working environment influences employees beyond their work is an area that has not gained due attention in the past studies. For instance, Carter et al., (2020) highlighted that the physical working environment should be investigated for the quality of employees' outcomes specifically the behavior beyond job routine and duties (OCB). Ashkanasy et al. (2014) also called for a study by focusing on "workspace research has tended to be isolated in specific disciplines outside the usual scope of organizational behavior and management" (p. 1169), where research frequently centers around regions such as architecture or facilities management. Furthermore, the mechanism between the physical working environment and employees' outcomes (e.g. OCB) has called for the investigation in recent studies (e.g. Kang et al., 2020; Suyantiningsih et al., 2018). Against this gap, this study aims to investigate the mediating role of perceived organizational support in the aforementioned relationship. The said association can be considered plausible, as organizational leaders, in order to achieve strategic corporate goals, must consider their workspace environment (Gou, et al., 2013) and an environment that is perceived as supportive and encouraging is considered as a source of support (i.e. perceived organizational

support). The perceptions of support in turn are expected to make employees work beyond their usual job outcomes (i.e. OCB). Leadership sets an environment and practices where employees must excel and survive to attract and retain the workforce (Myerson et al., 2010; Zelinsky, 2002).

This theory basis on the premise of social exchange theory (Blau, 1964) and rule of reciprocity (Gouldner, 1960), where both recommend that positive, valuable investments made by the association make commitments for employees to respond with constructive manners. This research suggests that the organizational investment source is environmental workspace quality (EWQ). Along with workers' investment in the work environment and workspace, an exchange relationship is probably going to shape bringing about upgraded commitment and perceived organizational support (POS) and ensuing representative result as organizational citizenship behaviors (OCBs).

This research contributes to the environmental psychology literature by focusing on what indoor and open-air places mean for individuals intellectually, expressively, and socially (Steg et al., 2013). For employees, these conditions incorporate their quick office workspace just as the structures and encompassing spaces in which they work (Vischer, 2007; Wells et al., 2016; Wohlers et al., 2019). Relatively, the outdoor workspace incorporates the constructed environment and outside spaces related to one's work. This research grabs on environmental psychology to comprehend the impact of employee perspectives related to the external workspace. This research relies on the work and focuses on the impact of office structure (Wohlers et al., 2019; Wohlers & Hertel, 2017), colleague engagement (Morrison and Macky, 2017), and office comfort level (Vischer, 2007; 2008). Furthermore, the study contributes to the organizational behavior literature by contemplating OCBs as an output of EWQ, we fasten essential mediator (POS).

## **Literature Review**

### **Environmental workspace quality and organizational citizenship behaviors:**

Past literature highlights that an environment of an organization influences employees' feelings and behaviors. The working environmental factors like air, lightning, and noise effects the workplace emotions of employees (Kim & de Dear, 2013). The literature on environmental psychology signifies that working aspects like greenery and plantation in the vicinity of the office influences employees positively and reduce stress, anxiety and increase positive moods (Chang & Chen, 2005). Furthermore, the working features like a place for entertainment and fund also work as a positive source of employees' emotions and moods. Such features are also found to attract and retain the talent as such

efforts are considered as the community service offered by the organization (Florida et al., 2011). Such amenity factors have been considered as the organizational factors that aim at provision of an environment aimed at provision of services to the employees and protection of their psychological and physical needs (Carter et al., 2020). For instance, provision of sports and physical activities opportunities by the organization can influence employees' outcomes. Like, when employees have facilities where they may have physical activities they tend to have mental wellbeing while improving physical health. Provision of leisure time and activities by the organization would improve their psychological and physical state (Kang et al., 2020). The pleasure and psychological satisfaction offered by such a working environment ultimately influences employees to perceive positively about their organization and resultantly they tend to work beyond their routine jobs (i.e. OCB; Carter et al., 2020). The working environment is also found to be a significant predictor of reduced stress and a sense of achievement (Said and Al-Shafei, 2021), and individuals having such an environment have a higher level of self-belief towards the accomplishment of their tasks and even beyond (Hartman et al., 2020; Liu & Dai, 2017). In an organization where there is less stress and employees have positive moods, they tend to engage in discretionary behaviors (e.g. OCB), to reciprocate their organization for the provision of an attractive physical environment (Blau, 1964, Gouldner, 1960). Thus, following research hypothesis is assumed:

**H1:** EWQ is positively related with the OCB of employees

### **Mediating role of Perceived organizational support**

Perceived organizational support (POS), is the “the extent to which the organization values their contributions and cares about their well-being” (Eisenberger et al., 1986, p. 500). While looking at the antecedents of POS it has been observed that it is the outcome of various organizational level inputs (Coyle-Shapiro & Conway, 2005). Researchers have observed that reward system, autonomy, role stress, and working conditions are essential determinants of POS (Ahmed & Nawaz, 2015; Rhoades & Eisenberger, 2002). The working features like ergonomic and ambient working conditions show that the organization attempts to create comfort and support for the employees and considers it as favorable considerations of the organization towards the employees. It is also considered as a commitment employee show towards the employees, thus considers it a way to meet their values, physiological and psychological needs (Carter et al., 2020).

The provision of a better working environment depicts the value and care the organization shows towards the employees. In return, employees would develop a positive view of the organization and feel a stronger bond with the organization. According to SET (Blau, 1964), this could be attributed as an

exchange where the favor from the organization would be perceived positively by the employees, but it is not an end to exchange rather employees tend to reciprocate favors offered by the organization (Goulter, 1960). According to Rhoades et al., (2001) POS creates a “felt obligation to care about the organization’s welfare and help the organization reach its objectives” (p. 825). One of such outcomes could be employees' volunteer efforts towards the organization and its stakeholders which is often measured as organizational citizenship behavior or OCB. This could be one of the ways through which employees can reciprocate the favors offered by the organization (i.e. environmental quality) by engaging in behaviors that may not be the responsibility of employees rather a volunteer and optional effort (Riggle et al., 2009). But it may arise when employees feel the presence of support from the organization translated due to a better working environment thus the following mediation hypotheses are assumed:

- H<sub>2</sub>: Environmental workplace quality is positively related with the perceptions of organizational support
- H<sub>3</sub>: Perceptions of organization support are positively related with the employees’ organizational citizenship behavior
- H<sub>4</sub>: The relationship between Environmental workplace quality and organizational citizenship behavior is mediated by perceived organizational support

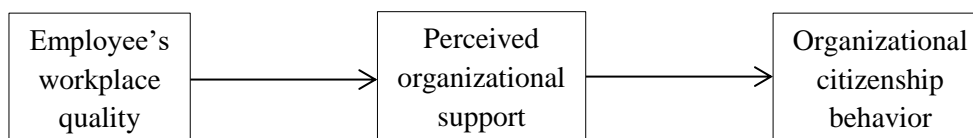


Figure-1: Conceptual model

## Research Methodology

Using cross sectional study design, the data of the current study were collected from students of executive classes of various university level programs. The executive classes have those students that are working either as an employee or employers, thus interact with the working environment. Using convenience sampling technique online survey was carried out where Google-forms were generated to elicit the responses. 209 responses were received while five of them were incomplete, and 204 responses were used for analysis. Most of the respondents were male (53%), with average age of 35.7 years, 79% were employees somewhere with work experience of 11.75 years. Environmental workplace quality (EWQ) was operationalized using 11 items scale of Carter et al., (2021) that covers items like “offers lounge or café space in which I can

work”. Perceived organizational support was measured using Rhoades et al., (2001) scale covering items like “help is available from my organization when I have a problem”. Organizational citizenship behavior was assessed using Saks (2006) scale that had items like “I offer ideas to improve the functioning of the organization”. The data collected through questionnaire was assessed using regression analysis.

### Data Analysis & Results

Before hypotheses testing, data were analyzed for preliminary data analysis covering reliability, validity, descriptive statistics and correlation. Results for reliability, descriptive and correlation are presented in table-1. The results reveal that all of the measure have acceptable reliability values (i.e. > 0.70) (Babbie, 1992). Customers depicted moderate level of OCB (mean=3.30, SD=0.901), perceived organizational support (mean=3.15, SD=1.012) and low environmental workplace quality (mean=2.15, SD=1.392). Correlation results signify that environmental workplace quality is positively correlated with the perceptions of organizational support ( $r=.21$ ;  $p<0.05$ ) and organizational citizenship behavior ( $r=.14$ ;  $p<0.1$ ). It is also evident that perceived organizational support is positively related with organizational citizenship behavior ( $r= .29$ ;  $p>0.05$ ). The reliability analysis results are shown in the diagonal lines where it is evident that the scales are reliable as the tabulated values (0.74 – 0.91) are greater than the standard value of 0.70 (Babbie, 1992).

Table-1

*Descriptive statistics, reliability, and correlation matrix*

N=204		Mean (SD)	1	2	3
1	Environmental workplace quality	2.15 (1.392)	.74)	-	
2	Perceived organizational support	3.15 (1.012)	.21*	(0.91)	-
3	Organizational citizenship behavior	3.30 (.901)	.14**	.29*	(0.87)

\* $<0.05$ , \*\* $<.1$

Before hypotheses testing data was analyzed for validity analysis, the results of which are shown in table-2. The measurement model showed a satisfactory model fit (CMIN/DF= 2.091, RMR= 0.041, GFI= .901, AGFI= .889, CFI= .913, RMSEA= .048) (Nunnally & Bernstein, 1994). The factor loading of the factors was also within acceptable range ( $>0.50$ ; Hair et al., 2006). The model was also used to assess the discriminant and convergent validity. In order to have discriminant validity the value of AVE should exceed value of correlational coefficient (Fornell & Larcker, 1981) and correlational coefficient of factors should not exceed 0.85 (Kline, 2005). As both the requirements were met the measures met the requirements of discriminant validity.

Table 2  
*Standardized loadings, Composite Reliability and Average Variance Extracted*

Items	Standardized loading	CR	AVE
Environmental workplace quality	0.50 – 0.79	0.810	0.613
Perceived organizational support	0.61 – 0.93	0.793	0.590
Organizational citizenship behavior	0.53 – 0.90	0.893	0.603

All hypotheses were assessed using Hayes process macros version 21 (Preacher et al., 2007), the results of which are shown in table-2. The findings reveal that environmental working quality is significantly related with the OCB of employees ( $\beta = 0.310$ ,  $p = < 0.05$ ) and perceived organizational support ( $\beta = 0.193$ ,  $p = < 0.01$ ), it is therefore inferred that H1 & H2 are accepted. Additionally, job insecurity is negatively and significantly associated with POS ( $\beta = -.292$ ,  $p = < 0.01$ ). Additionally, perceived organizational support is significantly related with OCB ( $\beta = .0236$ ,  $p = .00 < 0.05$ ). The results for mediation analysis are also shown in the table, where it is evident that relationship between environmental working quality and OCB is mediated by perceived organizational support ( $p = .0939$ , LLCI=0.0162, ULCI=0.0201), thus H4 is also supported.

Table-3  
*Hypotheses Testing Results*

Hypothesized Path	Effect	Standardized Regression weight	P	Results	
H <sub>1</sub>	EWQ-OCB	0.310	0.061	Not supported	
H <sub>2</sub>	EWQ-POS	0.193	0.001	Supported	
H <sub>3</sub>	POS-OCB	0.236	0.000	Supported	
		Weight	SE	LLCI	ULCI
H <sub>4</sub>	EWQ-POS-OCB	0.0939	0.0331	0.0162	0.0201

## Discussion

The current research study aimed at investigating the relationship of environmental workspace quality on organizational citizenship behavior in the presence of mediating role of perceived organizational support, particularly from the perspective of a workspace environment in Pakistan. In this way, the present study contributes to the literature by highlighting the importance of an individual's workplace environment as such importance further resulted in the form of employee's attitude and behavior. Four hypotheses were created to test the aforementioned relationships. The findings of the study reveal that employee's environmental workplace quality is positively related to both

organizational citizenship behavior and perceived organizational support as an employee has to deal with both the physical and non-physical environment of business, and a supportive physical environment can influence the way employees to work (Seong, 2020). Moreover, it has also been reported that, while talking about job-related outcomes, previous studies have recommended that it increases employees' job outcomes (e.g. satisfaction, commitment, engagement, performance, and productivity level) within an organization (Okuyucu et al., 2021; Sadewo et al., 2021; Said & El-Shafei, 2021). The physical working characteristics (e.g. provision of sports and physical activities opportunities) by the organization can influence employees' outcomes. Like, when employees have facilities where they may have physical activities they tend to have mental wellbeing while improving physical health. Provision of leisure time and activities by the organization would improve their psychological and physical state (Kang et al., 2020). Thus, the findings support the assumption that better physical working environment will positively influence employees' and thus support the findings of previous studies.

The remaining part of the study aimed at investigating the effects of perceived organizational support on employees' organizational citizenship behavior and how it mediates the relationship between working environment and OCB. The findings of the study reveal that perceived organizational support is significantly related with organizational citizenship behavior, and significantly mediates the relation of employee's workplace quality and organizational citizenship behavior. The findings of our study are in lined or consistent with the following previous studies where it has been highlighted that working environment influences employees' attitudes and behaviors (Carter et al., 2020; Kang et al., 2020; Seong, 2020; Burr, 2021; Said & Al-Shafei, 2021).

The present study also supports the assumptions of social exchange theory established by Blau (1964) and Gouldner (1960) both of them recommend that positive, valuable investments made by the organizations make commitments for employees to respond with productive manners. This research suggests that the organizational investment source is environmental workspace quality (EWQ). Along with workers' investment in the work environment and workspace, an exchange relationship is probably going to shape bringing about upgraded commitment and perceived organizational support (POS) and ensuing representative result as organizational citizenship behaviors (OCBs).



## **Implications of the findings**

### **Managerial Implication**

The study findings show the importance of a workspace environment in any organization, which impacts the employee's perception and ultimately job-related behaviors. This study shows that if organizations support and balance the cost of structure space indoor, outdoor area like region, and size that will respond positively. The findings also reveal that a better working environment creates perceptions of support for the organization, which in turn increases employees' willingness to go beyond their conventional jobs to reciprocate. Hence, we learn that the environmental workplace plays an essential role in increasing OCB. If an organization wants to have a quality outcome, it must focus on the workspace environment factors. A workspace environment includes lighting, noise, interior design, outdoor space, greenery that contributes to the organization's success. The findings also highlight that the outcomes of a better working environment could be perceptual (POS here), as well as behavioral (OCB here), thus the working environment should be focused on by the management of the organizations.

### **Theoretical Implication**

This study investigated the relationship between EWQ, OCB, and POS. Furthermore, the study has investigated the requirement for additional research on physical inspection of work qualities, and the environment of the workspace (Ashkanasy et al. 2014; Kang et al., 2020; Suyantiningsih et al., 2018). This research finds that EWQ is a significant factor that directly affects the OCB and mediating through POS. In these findings, POS is a significant output of the organization's active contribution. The findings support the theoretical premise of social exchange theory (Blau, 1964), and confers that the positive workplace treatments may positively influence the perceptions of the employees and they may reciprocate it by adopting positive behaviors aimed at benefitting the organization.

### **Limitations and future directions**

Every research has some restrictions and boundaries in any domain. Some features may limit the extent of this study but also allow future research. This study was conducted at the local level and only one university. Due to the specified time sample size is small. Therefore, more research is needed to understand whether these results are consistent with part-time workers outside Pakistan or other countries. The generality of our results, especially in the context of working quality, should also be checked on people working outside the office, such as retail or food services workers. For future investigation, this study recommends expanding the scope of research and building a bridge between the public and private sectors. It also suggests broadening the research tester to cover the working environment in different countries.

## Conclusion

The findings of the study help us conclude that the quality of the workspace environment is an essential factor when it comes to a positive outcome. The most distal factors are affecting employees' motivation, perception, and satisfaction, as well as their productivity and efficiency, are depending on their working environment. This investigation investigates the importance of environmental work quality in the organization and links it with employees' perceptions, attitudes, and behaviors. According to the results of this study, organizations that are practicing quality workspace environments such as where to situate their business, structures, and internal and external environment employees can work constructively. These practices will not only benefit the employee but also increase the organizations' productivity.

## References

- Ahmed, I., & Nawaz, M. M. (2015). Antecedents and outcomes of perceived organizational support: A literature survey approach. *Journal of Management Development* 34 (7) 867-890.
- Ashkanasy, N.M., Ayoko, O.B. and Jehn, K.A. (2014), "Understanding the physical environment of work and employee behavior: an affective events perspective", *Journal of Organizational Behavior*, 35, 1169-1184.
- Blau, P.M. (1964), *Exchange and Power in Social Life*, Wiley, New York, NY.
- Burr, H. (2021). Monitoring trends in psychosocial and physical working conditions: Challenges and suggestions for the 21st century. *Scandinavian Journal of Work, Environment & Health*, 47(5), 329-333.
- Carter, K. M., Harman, D. M., Walter, S. L., & Gruca, T. S. (2020). Relationship of immediate workspace and environmental workplace with organizational citizenship behaviors. *Journal of Managerial Psychology*, 36(4), 310-324.
- Chang, C.-Y. and Chen, P.-K. (2005), "Human response to window views and indoor plants in the workplace", *HortScience*, 40(5), 1354-1359.
- Coyle-Shapiro, J.A. and Conway, N. (2005), "Exchange relationships: examining psychological contracts and perceived organizational support", *Journal of Applied Psychology*, 90(4), 774-781.
- Davis, M.C., Leach, D.J. and Clegg, C.W. (2020). Breaking out of open-plan: extending social interference theory through an evaluation of contemporary offices. *Environment and Behavior*, 52 (9), 945-978.

- Eisenberger, R., Huntington, R., Hutchison, S. and Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology* 71(3) 500-507.
- Elsbach, K.D. and Pratt, M.G. (2007). The physical environment in organizations. *Academy of Management Annals*, 1(1), 181-224.
- Florida, R., Mellander, C. and Stolarick, K. (2011). Beautiful places: the role of perceived aesthetic beauty in community satisfaction. *Regional Studies*, 45(1), 33-48.
- Fornell, C. and Larcker, D.F., 1981. Structural equation models with unobservable variables and measurement error: *Algebra and statistics* 18(3) 382-388.
- Galanti, T., Guidetti, G., Mazzei, E., Zappalà, S., & Toscano, F. (2021). Work From home during the COVID-19 outbreak: The impact on employees' remote work productivity, engagement, and stress. *Journal of Occupational and Environmental Medicine*, 63(7), e426-e432.
- Gou, Z., Lau, S.Y. and Prasad, D. (2013), "Market readiness and policy implications for green buildings: case study from Hong Kong", *College Publishing*, 8(2), 162-173.
- Goulder, A.W. (1960). The norm of reciprocity: A preliminary statement. *American Sociological Review*. 25(2), 161-172.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis*. Pearson Prentice Hall Upper Saddle River: NJ.
- Hartman, C. L., Barcelona, R. J., Trauntvein, N. E., & Hall, S. L. (2020). Well-being and leisure-time physical activity psychosocial factors predict physical activity among university students. *Leisure Studies*, 39(1), 156-164.
- Kang, J. H., Ji, Y. H., Baek, W. Y., & Byon, K. K. (2020). Structural Relationship among Physical Self-Efficacy, Psychological Well-Being, and Organizational Citizenship Behavior among Hotel Employees: Moderating Effects of Leisure-Time Physical Activity. *International Journal of Environmental Research and Public Health*, 17(23), 8856.
- Kim, J. and de Dear, R. (2013). Workspace satisfaction: the privacy-communication trade-off in open plan offices. *Journal of Environmental Psychology*, 36, 18-26.
- Kim, K., & Choi, S. B. (2017) Influences of creative personality and working environment on the research productivity of business school faculty. *Creativity Research Journal*, 29(1), 10-20.

- Kline, T. (2005). *Psychological testing: A practical approach to design and evaluation*. Sage.
- Liu, H.; Dai, X. (2017). Correlation between physical activity and self-efficacy in Chinese university students, *Journal of Sport Psychology*, 26(4), 110–114.
- Morrison, R.L. and Macky, K.A. (2017), “The demands and resources arising from shared office spaces”, *Applied Ergonomics*, 60, 103-115.
- Myerson, J., Bichard, J.A. and Erlich, A. (2010), *New Demographics, New Workspace: Office Design for the Changing Workforce*, Ashgate Publishing, Burlington, VT.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York: McGrawHill.
- Okuyucu, K., Hignett, S., Gyi, D., & Doshani, A. (2021). Midwives’ thoughts about musculoskeletal disorders with an evaluation of working tasks. *Applied ergonomics*, 90, 103263.
- Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate behavioral research*, 42(1), 185-227.
- Redman, T., Hamilton, P., Malloch, H., & Kleymann, B. (2011). Working here makes me sick! The consequences of sick building syndrome. *Human Resource Management Journal*, 21(1), 14-27.
- Rhoades, L. and Eisenberger, R. (2002). Perceived organizational support: a review of the literature. *Journal of Applied Psychology*, 87(4), 698-714.
- Rhoades, L., Eisenberger, R. and Armeli, S. (2001). Affective commitment to the organization: the contribution of perceived organizational support. *Journal of Applied Psychology* 86(5), 825-836.
- Riggle, R.J., Edmondson, D.R. and Hansen, J.D. (2009). A meta-analysis of the relationship between perceived organizational support and job outcomes: 20 years of research. *Journal of Business Research*. 62(10) 1027-1030.
- Sadewo, I. P., Surachman, S., & Rofiaty, R. (2021). The influence of working environment to employee performance mediated by work motivation: A study of Malang, Indonesia retails stores. *International Journal of Research in Business and Social Science*, 10(3), 213-222.
- Said, R. M., & El-Shafei, D. A. (2021). Occupational stress, job satisfaction, and intent to leave: nurses working on front lines during COVID-19 pandemic in Zagazig City, Egypt. *Environmental Science and Pollution Research*, 28(7), 8791-8801.

- Saks, A. (2006). Antecedents and consequences of employee engagement. *Journal of Managerial Psychology* 21(7) 600-619.
- Seong, M. (2020). Differences in the working environment and health outcomes according to the employment type of delivery workers. *Korean Journal of Occupational Health Nursing*, 29(4), 316-324.
- Steg, L.E., Van Den Berg, A.E. and De Groot, J.I. (2013), *Environmental Psychology: An Introduction*, BPS Blackwell, Oxford.
- Suyantiningsih, T., Haryono, S., & Zami, A. (2018). Effects of Quality of Work Life (QWL) and Organizational Citizenship Behavior (OCB) on Job Performance among Community Health Center Paramedics in Bekasi City, Indonesia. *Journal of Economics and Sustainable Development*, 9(6), 54-65.
- Vischer, J. (2007). The effects of the physical environment on job performance: towards a theoretical model of workspace stress. *Stress and Health* 23 175-184.
- Vischer, J. (2008). Towards an environmental psychology of workspace: how people are affected by environments for work. *Architectural Science Review* 51(2) 97-108.
- Wells, N.M., Evans, G.W. and Cheek, K.A. (2016). Environmental psychology in Frumkin, H. (Ed.), *Environmental Health: From Global to Local*, 3rd ed., Jossey-Bass, San Francisco, CA, 203-230.
- Wohlens, C. and Hertel, G. (2017). Choosing where to work at work—towards a theoretical model of benefits and risks of activity-based flexible offices. *Ergonomics* 60, 467-486.
- Wohlens, C., Hartner-Tiefenthaler, M. and Hertel, G. (2019). The relation between activity-based work environments and office workers' job attitudes and vitality. *Environment and Behavior* 51 (2) 167-198.
- Zelinsky, M. (2002). *The Inspired Workspace: Interior Designs for Creativity and Productivity*, Rockport Publishers, Gloucester, MA