EXPLORING THE RELATIONSHIP BETWEEN PERSONALITY TYPE, OFFICE TYPE AND EMPLOYEE PERFORMANCE

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Abstract

The aim of the study was to investigate how office type influences employee performance, and whether this is different for different personalities. Multiple regression was used in order to test the impact of personality and office type on employee performance. The data was collected from 406 employees working in higher educational institutions, with different office types in Bangalore, Karnataka by using convenience sampling technique. Respondents who were emotionally stable, extroverted and conscientious showed higher level of performance. Specially more emotionally stable respondents showed greater performance, specifically those working in flex offices. Extroverts shown greater performance in shared and cell offices than in open plan and flex offices. Conscientious people shown greater performance in shared and open plan offices.

Keywords: Cell Offices, Open plan Offices, Shared rooms, Flex Offices, Personality, Big five traits, Employee performance

I. Introduction

Good office design can really strengthen, as well as improve the organizational success in many ways. Suitable office design can be used to improve employee’s health and safety so that employees feel happy to work in that environment. A typical employee spends most of the time in the office. Hence it is important to design the office in such a way that employees feel comfortable and can concentrate on their job and perform their duty efficiently. Currently many organizations are following flexible ways of working according to the tasks which need to be completed. Recent research (Ashkanasy et al., 2014; Seddigh et al., 2016) have analyzed about the association between office type, employee work...
environment, health problems and their performance. But studies on the contextual effects of employee’s attitude, experience, performance and needs are yet to be studied. In their study, Oldham, Cummings, & Zhou, (1995) reveals individual differences in personality and office type can influence largely workers’ performance. According to Colquitt, LePine & Wesson, (2010), one of the important elements of research on organizational behavior is job performance. Significant improvement in work performance leads to economic improvement through cost reduction and improved profitability. So, work performance is the main aspect that contributes to the productivity of organizations. Like any other organization the educational institute’s success also depends on employee’s performance and is considered as the significant antecedent of organizational effectiveness (Yusoff, Khan & Azam, 2013). McCoy (2002), revealed that in management research, most of the studies which are related to office environment were identified. Those studies focus mainly on organizational and business tendencies, structure of the organization and its policies. The main interest in this field of study (Frings-Dresen, 2005) is performance of the employees. While understanding the impact of office type on employee performance, there is still a need for the in-depth study of the moderating effect of various personality types on employee performance.

II. Review of Literature

A. Office Type and Employee Performance

In the view of Yerkes & Dodson (1908), performance can be influenced by arousal level of employees. Their This is called as Yerkes-Dodson law. According to this law performance will be upgraded by increasing arousal level. states that enhanced levels of arousal will improve, but only up until the optimum arousal level is reached. Yerkes and Dodson (1908), researched about arousal hypothesis and found that employee performance is affected by work environment. Arousal hypothesis suggests that workers perform very efficiently at medium levels of arousal. According to Cohen, (1978), impact of work environment on performance can be understood by using cognitive theory. According to cognitive theory attention span of individual and performance has strong relationship between them. Performance can be affected because of noise and temperature. Stimulation can be produced through both physical and psychosomatic procedures. Sundstrom, (1986), stated that arousal can be increased because of temperature and noise can generate emotional reactions. Lazarus, (1966), says that similar to arousal, stress may be defined as a form of emotional and functional enlistment that affects employee performance. Performance of simple jobs can be enhanced by slight stress but severe stress can impact badly on the performance of complex jobs (Berkun, 2000). According to Oldham et al., (1995) person-environment fit theory, if the work environment is perfectly matching the characteristics of employees and their type of job then it will create positive outcomes, such as job satisfaction, involvement, sincerity in job and cooperation with coworkers. But poor fit of work environment creates a lot of negative outcomes such as health issues, stress and strain and leads to high turnover which affect the productivity of the organization. Eminent Scholars like Ostroff & Schulte, (2007) and Schneider, Goldstein, & Smith, (1995), viewed that
organizational structure, strategy, and internal processes focus on the relationship between the environment and organizational performance. According to Ostroff & Shulte (2007) individuals' attitudes and intellectuals can only be understood by the interaction between people. According to them, opinions of the individuals cannot be determined neither by circumstances nor by personalities alone. Su, Murdock, & Rounds (2015), intended to explain that positive outcomes such as job satisfaction, performance improvement can be achieved by the best fit between the worker and the institution. Theories about person-environment explain the fit between the employees and factors of work environment (Caplan, 1987, Graham, 1976). Fit theories explain the relationship between employee and the job aspects. Another factor which interacts with job type and employee is office type. Health and performance of the employees are influenced by the different types of offices. Different office types suit workers according to their various behaviors, personalities, previous experiences and age. (Ashkanasy et al., 2014). Jahncke & Halin, (2012) examined the relationship between physical impairments and office type. They proposed that “People with learning problems might have more problems obstructing noise than the unaffected, while working in an open-plan office relatively than in a cell office”.

Employees who are physically challenged may have more difficulties and inconveniences in cell offices. Since cell offices are designed with many doors, gates and narrow passages. There is considerable amount of research to support the statement that different office type impact employee performance differently. Scholars like Fried, Slowik, Ben-david, & Tiegs, (2001), viewed that after shifting from cell offices to open-plan offices, higher level employees whose work need more concentration and attention, experienced more hitches. Open plan offices will be suitable for jobs which require more discussions between people. Cell offices will be suitable for jobs which require more privacy and concentration.

Eggerth (2015) identified that the fit between worker and environment is essential in order to reduce costs and enhance productivity. The organization's top management must identify the best type of office suitable for the particular job. They need to decide whether to provide open - plan office environments or flexible way of working or cell offices to their employees which can improve the economic benefit for the institution. De Croon et al., (2005) and Vischer (2008) had identified the influence of office type and other factors on health and performance of the workers. In their conceptual model they showed that office and working conditions lead to severe impact on worker’s health and performance.

If the office design provides adequate comfort and meets essential human needs, it will increase job satisfaction and leads to improved employee performance. In the view of Pejtersen et al. (2011) an open type office is related through harmful fitness and health related issues while compared with cell offices Whereas, Kim & de Dear (2013), found that cell offices help to overcome distraction and improve satisfaction. Bodin Danielsson & Bodin, (2008), analyzed about the impact of open, cell offices on worker’s health and performance and identified more differences between those office types. Perham, Banbury and Jones (2007), found a significant relationship between noise and employee performance.
B. Moderating role of Employee’s personality

Barrick & Mount (1991), researched about the big five factors: extroversion, agreeableness, conscientiousness, emotional stability and openness to experience. Extroversion is connected with being friendly, chatty and energetic. Agreeableness is connected with being considerate, flexible, believing, obliging, forgiving and tolerant. Conscientious is associated with dedication, goal oriented and strongminded. Low emotional stability is connected with unhappy, annoyed, worried, curious, open-minded, and artistically sensitive.

Many research studies identified the connection between Big Five personalities and performance. Barrick & Mount (1991), Hogan & Holland (2003), identified the positive relationship between conscientiousness, extroversion, openness to experience, emotional stability and agreeableness with performance. Barrick & Mount (1991), verified the connection among Big Five personality qualities and worker’s performance and had identified that some of the personality qualities expressively forecast worker’s performance. For sales related and customer service jobs, conscientiousness is the suitable forecaster of worker’s performance (Hurtz & Donovan, 2000). Sociability or agreeableness and openness to experience have strong connection with customer service and career performance (Barrick & Mount, 1991; Hurtz & Donovan, 2000).

McCrae & John (1992), viewed that employees differ in stable, emotional, interpersonal, experimental, attitudinal, and in the style of motivation. Complex taxonomy of individual differences was developed by psychologist Raymond Cattell. Later research revealed that five factors were the best fit with the data and later it was called as Five Factor Model. Barrick & Mount (1991), revealed that five factors of personality were found in different cultures. Conscientiousness is the best forecaster of performance for Skilled, Semi-Skilled type of jobs, and professional jobs where as emotional stability is the significant forecaster of performance (Ones, Dilchert, Viswesvaran, & Judge, 2007). Also, conscientiousness and extraversion have significant relationship with management skills and employee performance (Judge, Bono, Ilies, & Gerhardt, 2002).

Apart from the core influence of office type, there exists moderating impact of the job type and personality differences on employee performance. (Aram Seddigh, 2015). Oselad (2013), examined the association between personality and preferences. He proposed that, office type affects the employee performance differently with regard to diverse personality traits. He showed that extrovert employees prefer noiseless and calm rooms and low conscientiousness workers give preference to club or co-working spaces for exchanging their views. But agreeable employees prefer conference or club rooms for sharing ideas and knowledge.

The impact of office design may differ according to different personality of employees and varying job types. This part explains how office type and individual differences in the personality interact with each other and their impact on employee performance. Davis et al., (2011), Lee & Brand (2005), distinguished between open offices and cell offices. In their opinion, open offices suit the employees who need to
interact with many people. In contrary, cell offices suit those employees who need to concentrate more on their job. Therefore, they concluded that there exists a moderating effect of office design on worker’s concentration factor. Association between office types and extraversion personality characters is analysed by Gehlmann SC (1992). He verified the relation between the behavioral characteristics of extraversion in different types of offices. In the view of McCusker JA (2002), in an open or exposed type of offices diverse features of communication and characters with different personalities were available. He found that extraverts, agreeable and conscientious people were more contented with the communication climate and individual response. Also, he found that conscientious people were happy to discuss with their managers in an open-plan office. Maher A, von Hipple C (2005) and Mehrabian A (1977) found that people with low emotional stability had low job satisfaction and private offices couldn’t protect them against low job satisfaction. Eminent scholar like Seddigh, (2016), researched about the association between office type and personality and found a significant relationship between office type and personality and their impact on worker’s productivity. Only few researchers analysed the relation between personality, performance and office types. Current research paper examines about the employee performance in various types of offices in relation to different types of personality. In the present study the following research questions are formulated based on the discussions of the reviews of literature

1. Is there any significant relationship between office type and employee concert?
2. Is there any substantial relationship between personality and concert of the employees?
3. Is there any association between different office types and individual differences of employees?

To analyze and find out the solutions of the above research questions, using convenience sampling method, samples were taken from the list of employees of different higher educational institutions of Bangalore. Based on the review of literature the proposed research questions are illustrated in the form of a figure given below.
III. Measures

A. Office Type
To identify the office type where the employees were working, four-item scale related to office type was taken from questionnaire developed by Seddigh et.al, (2016).

B. Personality
International Personality Item Pool which has 50-items was used to identify the personality of the employee. The Big Five personality traits were measured by this scale.

C. Employee Performance
Various researches (Rosman Bin Md Yusoff et.al,) have concentrated on the different dimensions of employee performance. In this study, the following dimensions of employee performance were taken into consideration: Altruism, Conscientiousness and Task Performance. To measure those dimensions of performance of employees of higher education organizations, Bangalore, Karnataka, Goodman & Svyantek’s (1999), 25 items Job performance scale was used.

IV. Data Analysis
Impact of office type and personality on employee performance was tested by multiple regression analysis. Collaboration between office type and personality on employee performance (Table 1). Interpretations were made for personality-office type relations.

In model 1 of table 2, the outcomes for the control variable (gender in relation to the main outcome) were shown. In model 2, the core effects of office type and the personality traits are exhibited and in model 3, the connections between office type and the personality traits were displayed. R-squares, changes in R-squares, and results from F-tests of the significance and consequence of R square changes are displayed.

Table 1: Description of mean and standard deviation of the responses in different office types and personalities

<table>
<thead>
<tr>
<th>Office Type</th>
<th>N</th>
<th>Agreeableness (Mean)</th>
<th>Emotional stability (Mean)</th>
<th>Openness (Mean)</th>
<th>Extraversion (Mean)</th>
<th>Conscientiousness (Mean)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell</td>
<td>119</td>
<td>3.29 (0.43)</td>
<td>2.91 (0.67)</td>
<td>3.15 (0.40)</td>
<td>3.15 (0.47)</td>
<td>3.24 (0.48)</td>
</tr>
<tr>
<td>Shared</td>
<td>112</td>
<td>3.23 (0.43)</td>
<td>3.04 (0.43)</td>
<td>3.05 (0.39)</td>
<td>3.26 (0.44)</td>
<td>3.16 (0.35)</td>
</tr>
<tr>
<td>Open plan</td>
<td>105</td>
<td>3.41 (0.36)</td>
<td>2.81 (0.75)</td>
<td>3.24 (0.35)</td>
<td>3.2 (0.46)</td>
<td>3.35 (0.50)</td>
</tr>
<tr>
<td>Flex</td>
<td>70</td>
<td>3.28 (0.25)</td>
<td>2.99 (0.36)</td>
<td>3.15 (0.42)</td>
<td>3.05 (0.37)</td>
<td>3.04 (0.34)</td>
</tr>
<tr>
<td>Total</td>
<td>406</td>
<td>3.30 (0.37)</td>
<td>2.94 (0.55)</td>
<td>3.15 (0.39)</td>
<td>3.17 (0.44)</td>
<td>20. (0.42)</td>
</tr>
</tbody>
</table>
V. Results

Table 1 displays the average and standard deviation of the respondents with different personalities in four types of offices. The mean scores for agreeableness, openness, extraversion and conscientiousness were approximately same across the different offices except emotional stability. The core effects of office type and personality upon employee performance were displayed in Table 2. Among the traits of big five personality, emotional stability, extraversion and conscientiousness were the only traits which shown significant relationship with employee performance. Greater employee performance was shown by workers who were emotionally stable, less extroverted and those who were having less conscientiousness. (Table 2, Model 2). Respondents who were working in shared and open-plan, offices reported additional performance than those who were working in cell and flex offices.

Table 2: Key effects and interactions of office type and Big Five personality traits associated with employee performance, N = 406.

<table>
<thead>
<tr>
<th></th>
<th>Employee Performance</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td>0.7</td>
<td>0.6</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td>0.5</td>
<td>0.4</td>
</tr>
<tr>
<td><strong>Office Type</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cell</td>
<td></td>
<td>0.14*</td>
<td>0.12*</td>
</tr>
<tr>
<td>Shared</td>
<td></td>
<td>0.31**</td>
<td>0.29*</td>
</tr>
<tr>
<td>Open-plan</td>
<td></td>
<td>0.23*</td>
<td>0.21*</td>
</tr>
<tr>
<td>Flex</td>
<td></td>
<td>0.16**</td>
<td>0.15*</td>
</tr>
<tr>
<td><strong>Agreeableness</strong></td>
<td></td>
<td>0.12**</td>
<td>0.11**</td>
</tr>
<tr>
<td>Agreeableness* Cell</td>
<td></td>
<td>0.15**</td>
<td></td>
</tr>
<tr>
<td>Agreeableness* Shared</td>
<td></td>
<td>0.18**</td>
<td></td>
</tr>
<tr>
<td>Agreeableness* Open-plan</td>
<td></td>
<td>0.24**</td>
<td></td>
</tr>
<tr>
<td>Agreeableness*Flex</td>
<td></td>
<td>0.03**</td>
<td></td>
</tr>
<tr>
<td><strong>Emotional stability</strong></td>
<td></td>
<td>0.25**</td>
<td>0.24**</td>
</tr>
<tr>
<td>Emotional stability* Cell</td>
<td></td>
<td>0.13*</td>
<td></td>
</tr>
<tr>
<td>Emotional stability* Shared</td>
<td></td>
<td>0.14**</td>
<td></td>
</tr>
<tr>
<td>Emotional stability* Open-plan</td>
<td></td>
<td>0.16*</td>
<td></td>
</tr>
<tr>
<td>Emotional stability* Flex</td>
<td></td>
<td>0.18*</td>
<td></td>
</tr>
<tr>
<td><strong>Openness to experience</strong></td>
<td></td>
<td>-0.13**</td>
<td>-0.11**</td>
</tr>
<tr>
<td>Openness to experience* Cell</td>
<td></td>
<td>0.13**</td>
<td></td>
</tr>
<tr>
<td>Openness to experience* Shared</td>
<td></td>
<td>0.19**</td>
<td></td>
</tr>
<tr>
<td>Openness to experience* Open-plan</td>
<td></td>
<td>0.21**</td>
<td></td>
</tr>
<tr>
<td>Openness to experience* Flex</td>
<td></td>
<td>0.23**</td>
<td></td>
</tr>
</tbody>
</table>
Impact on employee performance by the collaborative effects between office type and personality traits was exposed in model 3 in Table 2.

Regarding personality, office type and employee performance, many significant interactions were identified. But there was no relationship between agreeableness and employee performance among employees in flex offices (b = 0.03, p = 0.215). Compared to this non-significant relationship, greater employee performance was stated by more agreeable respondents who were working in open offices (b = 0.24, p = 0.127), than in cell (b = 0.15, p = 0.234) and shared offices (b = 0.18, p = 0.324).

More emotionally stable employees reported greater performance (b = 0.24, p = 0.008). Employees working in shared offices and emotionally stable, were more significantly associated with moderate performance (b = 0.14, p = 0.009). Whereas those who were working in cell, open and flex offices shown same level of performance with moderate significance. Relations were not originated between openness to experience and office type with respect to employee performance (Fig 1). More significant performance was shown by extroverted people in cell offices (b = 0.23, p = 0.006). More extroverted employees working in shared type offices shown greater performance significantly (b = 0.29, p = 0.023).

In flex offices extrovert employees had a tendency to to report good performance at high level of significance (b= 0.18, p = 0.007) where as in open plan offices extroverted employees shown comparatively lower performance (b= 0.13, p = 0.034) (Fig 2). In shared offices, more conscientious employees tended to report higher performance significantly (b = 0.25, p = 0.032). But employees in cell and flex offices tended to report lower performance comparative to shared offices. Higher levels of performance were reported by more conscientious employees in open plan offices at a greater level of significance (b = 0.14, p = 0.003) (Fig 3).
Figure 1: Emotional Stability

- Moderate
- High Cell Offices
- Low Shared Offices
- Low Open Plan Offices
- High Shared Offices
- High Open Plan Offices
Figure 2: Extraversion

**Left Panel:**
- Moderator
- Low Cell Offices
- High Cell Offices

**Right Panel:**
- Moderator
- Low Shared Offices
- High Shared Offices

**Bottom Panel:**
- Moderator
- Low Open Plan Offices
- High Open Plan Offices

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Figure 3: Conscientiousness

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VI. Conclusion

In this paper we examined whether the relationship of office type with the outcome of employee performance varied depending on the respondents’ personality behaviors. The outcomes of the current paper offer provision for the occurrence of such interaction effects, with employee performance. The positive interaction between employee performance and the personality traits of emotional stability was stronger between employees working in open-plan and flex offices than among those in cell and shared offices. Also, positive interaction between employee performance and the personality traits of extraversion was stronger among employees working in shared offices followed by cell offices than among those in flex and open plan offices. There was no remarkable relation between agreeableness and office type with respect to performance. Similarly, there was no significant relation between openness to experience and office type with respect to performance. The positive interaction between employee performance and the personality traits of conscientiousness was stronger between employees working in shared offices followed by open offices than between those in flex and cell type offices.

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