The Relationship Between Technostress Creators and Organisational Commitment Among Academic Librarians

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Abstract

The aim of this study is to investigate the impact of technostress on organisational commitment among academic librarians in the Malaysian public higher learning institutions. It is hypothesised that technostress creators are negatively associated with organisational commitment. Self-administered survey method was utilised in gathering the required data. Technostress creators scale was employed to measure technostress level while Meyer and Allen’s Organisational Commitment scale was used to measure the level of organisational commitment. The results of Pearson correlation coefficient revealed no significant inverse relationships between technostress creators and organisational commitment. Nevertheless, the results of multiple regression analysis show that technostress creators jointly explained 13.1 percent to the variance in organisational commitment.

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Keywords: Technostress creators; Organisational commitment; Higher learning institutions; Academic librarian

1. Introduction

The continuous and rapid development of technology in this information era has not only resulted in higher effectiveness and efficiency in most organisations, but also contributes to higher level of technostress in the workplace. Coined in 1984 by a clinical psychologist, Dr. Craig Brod, technostress is defined as “a modern disease of adaptation caused by an inability to cope with the new computer technologies in a healthy manner. It manifests itself in two distinct but related ways: in the struggle to accept computer technology, and in the more specialized form of overidentification with computer technology” [1].

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According to Tarafdar et al. [2], technostress is a problem of adaptation which occurred due to a person’s inability to cope with or get used to information and communication technology (ICT). Additionally, they identified five technostress creators which include: (a) Techno-overload: A situation where ICT users are forced to work faster and longer; (b) Techno-invasion: A situation where ICT users feel that they can be reached anytime or being constantly “connected”; (c) Techno-complexity: A situation where ICT users feel that their skills are inadequate due to the complexity related to ICT; (d) Techno-insecurity: A situation where ICT users feel threatened that they will lose their job, either being replaced by the new ICT or by other people who are better in ICT compared to them; (e) Techno-uncertainty: A situation where ICT users feel uncertain since ICT is continuously changing and need upgrading.

Due to technostress, employees may suffer from anxiety which include symptoms like irritability, headaches, nightmares, insomnia, technological rejection, and technological resistance [2]. Rafter [3] found that those who did not welcome technology in the workplace had shown a decline in productivity.

One organisation that feels the direct impact of technological advancement is the library since the advancement of technology today has been the dominant force in improving and enhancing library services. Although technology in the library helps increase the effectiveness of information management and the speed of data search, it has also caused an enormous amount of strain on the librarians [4,5,6]. A survey by Kupersmith [7] revealed that a majority of library staff felt that their level of technostress has increased over the years and most of them regarded the computer-related stress they experienced as posing serious problems.

Technology is only a tool for organisational effectiveness and efficiency, which will be meaningless without committed employees. Referred to as organisational commitment, it is measured by the degree of employees’ attachment and involvement in the organisation, their willingness to put forth a lot of effort for the organisation’s sake, and the strong desire to stay with the organisation [8,9,10]. Committed employees have been found to have higher performance, lower turnover and absenteeism rate, higher productivity, and higher satisfaction [11,12, 23]. Nonetheless, previous studies have uncovered negative relationship between role stressors and organisational commitment [13,14,15,16]. Realising that technology can create stress in the workplace and recognising the influence of stress on organisational commitment, this study aims to examine the relationship between technostress and organisational commitment among academic librarians in the Malaysian public higher learning institutions. It is hypothesised that:

H1: There is a negative correlation between technostress creators and organisational commitment

H2: Technostress creators are jointly significant in explaining the variance of organisational commitment

2. Methodology

2.1. Sample and research instrument

The sample comprised of librarians from public higher learning institutions in Malaysia that have been set up for more than 10 years since these libraries are more established and have higher involvement in library automation. As the target population was small and known, the whole target population (282 librarians) was used as respondents for this study.

Data were gathered through self-administered survey method using a set of questionnaire as the research instrument. The first part of the questionnaire was designed to obtain demographic information of the respondent. The second part of the questionnaire was designed to measure the respondent’s level of technostress and level of organisational commitment. In this second part, the respondent was asked to
indicate the extent of their agreement to each statement based on a seven-point numerical scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree).

2.2. Measures

i. Technostress creators

In order to measure technostress level, Technostress Creators scale developed by Tarafdar et al. [2] was adapted. The constructs used to measure technostress in this instrument were found to resemble closely to stressors used in measuring occupational stress [15,17,18]. This scale comprises of 23 items which are grouped into five factors creating technostress: (a) Techno-overload: Measures the respondents’ agreement whether the technology used has changed their work pace, work habits, and workload; (b) Techno-invasion: Measures the respondents’ agreement on how the technology used has encroached into their personal life; (c) Techno-uncertainty: Measures the respondents’ agreement whether there were constant changes in the technology used in their workplace; (d) Techno-complexity: Measures the respondents’ perception towards the complexity of the technology used and the adequacy of their existing technological skills and knowledge; and (e) Techno-insecurity: Measures the respondents’ agreement whether the technology used is threatening their job security.

ii. Organisational commitment

Meyer and Allen’s Organisational Commitment scale [19] was employed to measure organisational commitment. This scale consists of 18 items measuring: (a) Affective commitment: The degree of the respondents’ attachment towards their organization; (b) Continuance commitment: The degree of the respondents’ belief on how much it will cost them if they leave the organisations they are currently working in; and (c) Normative commitment: The degree of the respondents’ obligation to continue staying with their current organisations.

3. Result and Analysis

In this study, Pearson correlation coefficient was employed to test the relationship between technostress creators and organisational commitment (H1). Multiple regressions analysis was further performed to examine the contribution of technostress creators to the variance in organisational commitment (H2).

Results of Pearson correlation coefficient (see Table 1), indicated significant positive correlations between techno-overload and techno-uncertainty with organisational commitment. Hence, H1 is rejected. This means that the increase in the level of technostress is not associated with the decrease in organisational commitment level.

The result of multiple regression analysis showed that all the five technostress creators jointly explained 13.1 percent ($R^2=0.131$) to the variance in organisational commitment. Although the $R^2$ of 13.1 percent seemed to be quite small, it is considered as respectable in the social science setting as it qualified as medium effect based on Cohen guidelines [20]. Furthermore, the F value (5.826) with a significant value of 0.000 suggested that the regression model for this study is statistically significant. Thus, H2 is accepted.
Table 1: Correlations between Technostress Creators and Organisational Commitment

<table>
<thead>
<tr>
<th></th>
<th>T-OV</th>
<th>T-INV</th>
<th>T-UNC</th>
<th>T-COMP</th>
<th>T-INS</th>
<th>OC</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-OV</td>
<td>1.000</td>
<td>0.400*</td>
<td>0.224*</td>
<td>0.258*</td>
<td>0.365*</td>
<td>0.185*</td>
</tr>
<tr>
<td>T-INV</td>
<td>1.000</td>
<td>0.136</td>
<td>0.020</td>
<td>0.488*</td>
<td>-0.040</td>
<td></td>
</tr>
<tr>
<td>T-UNC</td>
<td>1.000</td>
<td>0.136</td>
<td>0.020</td>
<td>0.308*</td>
<td>-0.009</td>
<td></td>
</tr>
<tr>
<td>T-COMP</td>
<td>1.000</td>
<td>0.484*</td>
<td>0.023</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T-INS</td>
<td>1.000</td>
<td>0.023</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OC</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level; T-OV=Techno-overload; T-INV=Techno-invasion; T-UNC=Techno-uncertainty; T-COMP=Techno-complexity; T-INS=Techno-insecurity; OC=Organisational Commitment

Nevertheless, Table 2 clearly shows that only techno-overload and techno-uncertainty contributed significantly to the equation (p<0.05). The beta coefficient value indicated that techno-uncertainty made the strongest unique contribution in explaining the variance in organisational commitment (B=0.295) while techno-overload made a lesser contribution (B=0.173).

Table 2: Impact of Technostress Creators on Organisational Commitment (Coefficients)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardised Coefficients</th>
<th>Standardised Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>3.623</td>
<td>0.351</td>
<td>10.335</td>
</tr>
<tr>
<td></td>
<td>Techno-overload</td>
<td>0.115</td>
<td>0.051</td>
<td>0.173</td>
</tr>
<tr>
<td></td>
<td>Techno-invasion</td>
<td>-0.087</td>
<td>0.049</td>
<td>-1.153</td>
</tr>
<tr>
<td></td>
<td>Techno-uncertainty</td>
<td>0.258</td>
<td>0.061</td>
<td>0.295</td>
</tr>
<tr>
<td></td>
<td>Techno-complexity</td>
<td>-0.027</td>
<td>0.054</td>
<td>-0.041</td>
</tr>
<tr>
<td></td>
<td>Techno-insecurity</td>
<td>0.034</td>
<td>0.059</td>
<td>0.049</td>
</tr>
</tbody>
</table>

a. Dependent variable: Organisational Commitment; * Significant at p<0.05

4. Conclusion

This study hypothesised a negative relationship between technostress creators and organisational commitment. Nevertheless, contrary to expectations, the results of this study revealed that none of the technostress creators was inversely correlated with organisational commitment. In addition, it is interesting to note that, although technostress creators were found to jointly explained 13.1 percent to the variance in organisational commitment, both the significant predictors to organisational commitment (techno-uncertainty and techno-overload) were positively related to organisational commitment.

The positive relationship between techno-uncertainty and techno-overload with organisational commitment confirmed the theory that stress is not all bad. It is believed that some employees regard heavy workload and tight deadlines as positive challenges that help enhanced their quality of work and job satisfaction [21]. These findings further support the idea of the transactional approach to stress that a potential source of distress (negative stress) to one person may be a source of eustress (positive stress) for another [22].

On the whole, this study demonstrates that a certain amount of stress is necessary as it will have positive influence in the well-being of the employees and organisations. It is hoped that the findings of this study would provide important comprehension and would be beneficial to the organisations in managing workplace stress, especially stress created by the usage of technology.
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References