IJITCE

ISSN 2347- 3657

International Journal of Information Technology & Computer Engineering

Email : ijitce.editor@gmail.com or editor@ijitce.com

International Journal of Information Technology & Computer Engineering

ISSN 2347–3657
Volume 3,Issue 2,June 2015

Computer self-eAcacy as a moderator of the relationship between computer training, use frequency, and burnout

Mr. Dr.Murali Naik

Abstract

The main aim of this paper is to test the moderating role of computer self-eAcacy in the relationship among computer training, frequency of usage and burnout (i.e. exhaustion andcynicism). The sample was made up of 140 workers using computer-aided technology in their jobs. Hierarchical multiple regression analyses were carried out. Results show that frequencyof usage and computer training are positively associated with computer self-eAcacy. Futher- more, we found interaction effects between computer training computer self-eAcacy on both indicators of burnout as outcomes. Computer self-eAcacy moderated the relationshipbetween computer training and burnout. Limitations of the study and practical implications of these findings are discussed.

Keywouds: Computer training; Frequency of usage; Computer self-eAcacy; Burnout

1. INTRODUCTION:

The use of computer-aided technology in the workplace is on the rise. Actually, in order to stay afloat in such a cutthroat market, it is typical practice for enterprises to introduce it and then continuously use it. While enhancing productivity and efficiency in the workplace is the primary goal of using this technology, there is a need to mitigate any potential risks to employees' well-being. Relatedly, there may be beneficial and negative impacts of computer-aided technology exposure on users' mental health, according to current empirical research on the topic.A large body of research indicates that prolonged exposure to technology (e.g., regular use, computer education, gaming, etc.) is associated with reducedworry (Bohlin & Hunt, 1995; Crable, Brodzinksi, Sherer & Jones, 1994; Igbaria & Chakrabarti, 1990; Jones & Wall, 1990; Halimo & Lepeenen, 1985; Hay, 1990; Okebukola, Smith, Caputi & Rawstorne, 2000; Okebukola, Summamopouw & Jegede, 1992; Todman & Monaghan, 1994).

The effects of technology on people's health cannot be attributed only to their exposure to it, according to other research. According to several studies, including those by Chua, Chen & Wong (1999), Horunka & Vitouch (1999), Leso & Peck (1992), Majchrzak & Borys (1998), Rousseau, Jamieson, Rogers, Mead & Sit (1998), Salanova & Schaufeli (2000), and Woodrow (1991), their mental health is influenced by exposure types and mediating variables, such as job characteristics and appraisal of exposure.Therefore, it seems that there is a complicated link between workers' well-being and their exposure to technology. Also related to this is the work of Salanova and Schaufeli (2000), who examined the relationship between technology exposure and burnout in 202 computer-aided workers in Spain. They discovered that the amount of time and

PROFESSOR & PRINCIPAL, DEPT OF ELECTRICAL & ELECTRONINCS ENGINEERING, GEETHANJALI COLLEGE OF ENGINEERING & TECHNOLOGY, KURNOOL, A.P, INDIA

ISSN 2347–3657
Volume 3,Issue 2,June 2015

frequency of exposure does not directly affect burnout, but rather how the user perceives it. Using Structural Equation Modelling (SEM), the authors of this research discovered that appraisal mediated the relationship between burnout symptoms (i.e., weariness and cynicism) and time and frequency. The evidence on the strength of the link between computer anxiety and computer experience is equivocal, while findings from a meta-analysis of the correlates of computer anxiety conducted by Chua et al. (1999) indicate that there is an inverse relationship. Based on these findings, it seems that some types of computer exposure help alleviate computer anxiety. Leso and Peck (1992) and Woodrow (1991) found no evidence that taking a programming class would alleviate computer fear. A study conducted by Smith, Caputi, and Rawstorne (2000) indicated that the more time spent using computers and the opportunities to do so were positively correlated with autonomy and enjoyment/usefulness, and negatively correlated with negative performance appraisals and anxiety/frustration. Additionally, there was a strong inverse relationship between computer anxiety and training. To further understand the connection between technology exposure and users' well-being, further study on different forms of exposure is required. This is why the current research considers two forms of technology exposure: regular use and formal computer education. Based on the research conducted by Salanova and Schaufeli, Chua et al., and Torkzadeh, Pflughoeft and Hall, these exposure metrics are widely utilized (1999).

More so, studies conducted on computer-assisted technologies in the last several years have highlighted the importantthe part that computer self-efficacy plays. According to Bandura's theory of self-eAcacy (1982, 1988, 1997), people should feel more confident and have more control over their computer-related knowledge and abilities if the system is easy to use. The capacity to generate one's own ideas by integrating one's cognitive, social, and behavioral subskills into integrated plans of action to accomplish countless purposes is described by Bandura (1981, p. 391). A person's belief in his or her own competence with respect to certain domains of computer science is known as computer self-eAcacy, according to Murphy, Coover, and Owen (1989). The performance results are greatly affected by one's self-eAcacy beliefs, rather than by the inherent talents one has in relation to the activity, as stated by Bandura (1988).So, even if someone is technically skilled with computers, they may still lack the self-assurance that comes from believing in their own abilities, which may lead to poor performance on the job, early resignation, or even avoidance of computers altogether. Effort, perseverance, task performance, and the activities chosen to engage in are all affected by one's level of self-eAcacy, according to research (Multon, Brown & Lent, 1991).But studies on exposure kinds and self-efficacy have not yet reached a consensus. For example, when it comes to computers, prior experience is a major element in determining self-eAcacy, according to CoAn and MacIntyre (1999). To be more precise, the findings demonstrate that students' judgments of their own computer-related self-efficacy improve in direct correlation to the amount of experience they have with computers. However, when considering the duration of system usage, Rousseau et al. (1998) discovered that perceived efficacy with the system was not solely determined by technology exposure (i.e., the number of times the system had been used). It seems that exposure to technology is a necessary but insufficient condition for expertise. Since they found that simple exposure to the system had no effect on users' perceptions of its efficacy, they reasoned that teaching users the more complex commands would lead to better search results. Users have the potential to improve their proficiency and eAcency via training. In this regard, Torkzadeh et al. (1999) demonstrated that participants' computer self-eAcacy was substantially enhanced after receiving instruction. Respondents reported a modest degree of computer self-eAcacy before beginning the program, and a considerable improvement following completion of the program. In a study

ISSN 2347–3657
Volume 3,Issue 2,June 2015

of 179 undergraduates majoring in psychology, Smith et al. (2000) discovered that participants' level of computer confidence was positively correlated with their level of training and education. Bandura (1997), Grau, Salanova & Peiro' (2000), Jex & Bliese (1999), Schwarzer (1999), and Speier & Frese (1997) are among the studies that have demonstrated that self-eAcacy is both an outcome variable and a moderating variable in the stress process. Computer self-eAcacy serves as both an outcome and a moderating variable in this research, which aims to provide light on the correlations between "computer training," "frequency of use," and any other relevant ariables.Computer self-eAcacy may vary by age and gender, according to the research.Accordingly, the associations between technology exposure and computer self-eAcacy may be obscured by these factors. According to many studies (Carlson & Grabowski, 1992; Hattie, 1990; Jorde-Bloom, 1988; Miura, 1987), men seem to have a far greater level of computer self-efficacy compared to women. Studies have shown that gender disparities in computer self-eAcacy vary with task difficulty; yet, others have identified no substantial differences between the sexes (Torkzadeh et al., 1999; Loyd & Gressard, 1984; Lewis, 1985). (Busch, 1995; Murphy et al., 1989; Torkzadeh & Houfterous, 1994) Men report greater degrees of self-eAcacy for complicated tasks, but not for basic activities. Comparing the mental impacts of computer use across age groups is a neglected area of research (Birdi & Zapf, 1997). While there is some indirect evidence between age with computer self-eAcacy, it is far from conclusive. Research suggests that older adults may experience stress while doing duties that require computer use. However, factors such as employment expectations, hardware design, and computer literacy may all play a role.Their talents are overwhelmed by the amount of experience (Czaja & Sharit, 1993; Salthouse, 1991; Warr, 1994). We have already shown that prior exposure to computers is a strong indicator of how comfortable one is with them and how much anxiety one may feel while using them (Chua et al., 1999). Fear of computers is common among the elderly due to their lack of familiarity with them (Bandalos & Benson, 1990). There is evidence that older adults are more prone to making mistakes and have a negative emotional orientation toward new technologies (Birdi & Zapf, 1997; Birdi, Pennington & Zapf, 1997). The projected consequence of one's purposive performance or mastery experience is the most powerful source of self-efficacy beliefs, according to Bandura's (1982, 1988, 1997) social cognitive theory, when it comes to making mistakes and having bad experiences on certain tasks. A person's eAcacy beliefs are based on their interpretations of the consequences of their acts, which they measure. those that are correctly perceived boost self-confidence, whereas those that are incorrectly interpreted bring it down. Overall, these indicators suggest that older workers may not have the same level of confidence in their ability to use computers as younger workers when presented with computer-related activities.Lastly, as an end measure, we use the term "professional burnout," which isto computer proficiency and regular use. The field of human services was the initial focus of burnout research (for reviews, see Lee & Ashforth, 1999б; Schau-feli & Enzmann, 1998), but there has been a recent trend towards studying burnout in other professional areas. The Maslach Burnout Inventory-General Survey (MBI-GS; Schaufeli, Leiter, Maslach & Jackson, 1999) is a newly created self-report questionnaire that may be used to evaluate burnout in contexts other than human services. This questionnaire provides a significant driving force. The MBI-GS shares three subscales with the original MBI-Human Services Survey (Maslach & Jack-son, 198): exhaustion (the depletion of energy from overwork), cynicism (apathy, disinterest, and distancing from one's work), and professional efficacy (a feeling of success and competence in one's job). Burnout is characterized by low levels of professional efficacy, extreme fatigue, and cynicism.A cynical and pessimistic outlook on work and an assessment of one's eAcacy at the job are other components of burnout, in addition

ISSN 2347–3657
Volume 3,Issue 2,June 2015

to an emotional reaction (i.e., fatigue) comparable to an orthodox job strain variable. Therefore, it provides an opportunity to investigate the connections with strain, unfavorable attitude toward work, and perceived level of competence, all of which are important for workers' health and wellbeing. As indications of burnout, this research will concentrate on the first two dimensions: tiredness and cynicism. These aspects are thought of as the "essential components of burnout" (Green, Walkey & Taylor, 1991, p. 43). Furthermore, professional eAcacy, the third component of burnout, is assumed to emerge mostly independently of tiredness and cynicism in Leiter's (1993) theoretical model. A recent meta-analysis by De Rijk, Le Blanc, Schaufeli, and de Jonge (1998) confirmed the independent effect of professional eAcacy. Professional eAcacy may not be a real component of burnout response, but rather a trait similar to self-eAcacy (Cordes & Dougherty, 1993). However, there have been just two research on digital marketingTechnology and exhaustion have been studied by Salanova and Schaufeli (2000) and Schaufeli, Heijsers, and Reis Miranda (1995). The first research to examine intensive care unit nurses indicated a correlation between burnout and the use of technology, namely sophisticated mechanical breathing systems. Recent research has shown that evaluations of one's own computer experience mediate the relationship between one's own usage frequency and duration and burnout. To further understand the connection between technology use and burnout, however, further research examining various forms of technology exposure is required.Here, we want to see if computer self-eAcacy acts as a moderator between different forms of technology exposure (i.e., how often we use computers and how much training we get) and burnout symptoms (i.e., how exhausted and cynical we become). To be more precise, our theories are:After taking age and gender into account, we anticipate that computer self-eAcacy will be positively correlated with training and frequency of use.Computer self-efficacy and the forms of technology exposure (i.e., how often people use computers and whether they have had computer training) are expected to interact with each other to determine degrees of tiredness, according to Hypothesis 2. Employees that may not feel confident using computers willexperience more weariness as the amount of time spent using and practicing with computers increases. When employees have a high degree of computer self-efficacy and have a lot of training, they won't get tired as easily.Computer self-efficacy is predicted to be influenced by the forms of technology exposure, namely the frequency of use and computer training, according to Hypothesis 3.Effectiveness on cynicism levels. Employees who lack confidence in their computer skills are more likely to be cynical when faced with high levels of computer training and frequent use. High levels of computer training and use are associated with lower levels of skepticism among workers who already have high levels of computer self-efficacy.

2.Method

Section 2.1.Participant and Puoceduue

Four ladies (or 4% of the total) and seven men (or 54% of the total) from five separate Spanish enterprises in the tile and public administration industries made up the sample. Ninety-five people from three private tile firms and forty-five from two public sector oAces participated in the research. Jobs including sales, administration, assembly line, computer use, and customer service orientation were all part of their job description. Production (11% of the total), laboratory (13% of the total), administration and clerical (47% of the total), sales (15%), and customer orientation (14% of the total) were the most common occupational groupings. Everyone in the sample had one thing in common: they all relied on some kind of computer-aided technology for their work. For the most part, employees implementedcomputer devices, software, or word processors—91%. Nine percent made use of AMT, which includes CAD and CNC, or advanced manufacturing

ISSN 2347–3657
Volume 3,Issue 2,June 2015

technology. With a standard deviation of 8.05 and ages ranging from 20 to 5± years, the sample had an average age of 32.8 years.Participants were requested to fill out a battery of self-report surveys. The surveys were sent in an envelope and were to be distributed by the risk prevention specialists at each company. The goal of the research, the fact that participation was entirely voluntary, and the assurance of secrecy were all laid out in a covering letter. The study team or the individual who delivered the questions might get the completed forms within the sealed envelope.

Section 2.2.Measuues

Part 2.2.1.Categories of technological displays

Two kinds were employed: computer training and frequency of use. We asked employees to rate the amount of time each week that they used computer-aided technology (ranging from 0 to 100) in order to get a sense of how often it was used. The variable was then changed to have a range of 0 to 10 so it could be included in the research alongside the other variables. In order to gauge employees' level of computer training, we asked them if they had received any particular instruction on the computer-assisted tools they were using.Section 2.2.2.Evaluate your own efficacyBeas, Agut, Salanova, and Grau (1999) validated a self-constructed scale to measure computer self-eAcacy. I feel quite adept with computer assisted technology is an example of one thing. This scale has an alpha coefficient of 0.79.

Section 2.2.3.Buunout

The exhaustion subscale (Schaufeli et al., 1999 ±) consisted of five questions (e.g., "I feel emotionally exhausted by my job") and the cynicism subscale (e.g., "I have grown more cynical about whether my work adds any-thing) as measures of burnout. Other research (Leiter & Schaufeli, 1999; Salanova & Schaufeli, 2000; Schaufeli et al., 1995; Shutte, Toppinen, Halimo & Schaufeli, 2000) demonstrated that item 13 from the cynicism sub-scale did not have sufficient factorial validity, hence it was removed from the current version. If the internal consistency is to be raised over the 0.70 threshold, Shutte et al. emphasized that this item should be eliminated. The item's ambivalence might be to blame for this ("I just want to do my job and not be bothered."). Reports indicated alpha coefficients of 0.89 for fatigue and 0.87 for cynicism.

Chapter 2.3.Evaluation of data

To evaluate the hypothesis of this research, hierarchical multiple regression analysis was used. The primary goal of the first regression study was to determine the impact of different forms of technology exposure (computer use frequency and total exposure time).

eAcacy instruction on computers. To further understand the impact of computer self-eAcacy as a mediator and the two measures of burnout, we conducted hierarchical multiple regression analyses to identify the main and interaction effects of technology exposure types (frequency and training). In order to test for interaction effects, we generated cross-product terms of standardized independent variables (cf. Cohen & Cohen, 1983; Hleinbaum, Hupper & Muller, 1988).

3.Final Product

All of the analyzed variables' zero-order correlation, alpha coefficients, standard deviations, ranges, and averages are shown in Table 1. With a Cronbach's alpha of 2.70, which is considered sufficient, the alpha coefficients are internally consistent (Nunnaly, 1978). To ensure that for each case, we controlled forchronological age and gender. With the exception of the association between computer self-eAcacy and cynicism, there is no difference in findings when adjusting for gender. After taking gender into account, the correlation coefficient went up from u= 0.13 (n.s.) to u= 0.17 (P<0.05). In conclusion, when we account for age, we find that most correlation coefficients are unchanged, with the exception of the one between computer training and computer self-efficacy. After taking age into

International Journal of Information Technology & Computer Engineering

ISSN 2347–3657
Volume 3,Issue 2,June 2015

account, the correlation coefficient went up from u=0.07 (n.s.) to u=0.24 (P<0.01).

Section 3.1.Question answering

3.1. 1.Evaluate your own efficacy

Table 2 shows the two-step process used to input the independent variables into the regression equation for testing hypothesis 1. To avoid any potential confusion, the first step was to include age in the equation. This was done since there is a substantial correlation coefficient (u= 0.42, P<0.01) between age and computer self-efficacy, which is the criteria in this regression. Step two involves regular use and computer education.

Table 1

Range, means, standard deviations, internal consistencies (Cronbach‘s 2) and zero-order correlations(n=140)

Variable	Range	M	DT	Alpha	2	3	4	5	6	7
1. Age	20–56	32.8	8.05	–	—0.23**	—0.15	0.32**	—0.42**	0.02	0.11
2. Gender	1–2	1.40	0.50	–	–	0.28**	—0.01	0.09	0.16	0.13
3. Frequency of usage	0–10	6.2	2.70	–	–	–	—0.09	0.20*	0.06	0.04
4. Computer training	1–2	1.50	0.49	–	–	–	–	0.07	0.05	0.06
5. Computer self-eAcacy	1–7	5.6	1.02 0.79	–	–	–	–	–	—0.17*	—0.13
6. Exhaustion	0–6	1.8	1.02 0.82	–	–	–	–	–	–	0.54**
7. Cynicism	0–6	1.2	1.23 0.86	–	–	–	–	–	–	–

*P<0.05.

**P<0.01.

Table 2

Hierarchical multiple regression analysis of types of technology exposure on computer self-eAcacy(n=140)[a]

	B	R^2 change
1. Age	—0.47***	0.17***
2. Frequency of usage	0.15*	0.07**
Computer training	0.20**	
Multiple R	0.50	
R^2	0.24	
F	14.14***	

[a] The B values are the coeAcients from the final stage of the regression analysis; due to rounding off, R^2differs 0.01 from the sum of R^2 change.

*P<0.05.

**P<0.01.

***P<0.001.

were entered. In order to interpret the a priori standardized variables as correctly as possible, nonstandardised regression coeAcients were performed.

A significant multivariate test value was found. The results show that both fre- quency of usage and computer training are positively associated with computer self- eAcacy, and supported the first hypothesis.

International Journal of Information Technology & Computer Engineering
ISSN 2347–3657
Volume 3,Issue 2,June 2015

1.1.1. Buunout

The independent variables were entered into the regression equation in four suc- cessive steps. In the first step, (1) frequency of usage and computer training, (2) the moderator (computer self-eAcacy), (3) the two-way interaction term (fre- quency moderator and training moderator, and (4) the three-way interaction term (frequency training moderator) were entered, respectively. In total, two hier- archical multiple regression analysis (i.e. by exhaustion and cynicism) were per- formed. The significant interaction effects are graphically shown. Following Cohen and Cohen (1983) and Jaccard, Turrisi and Wan (1990) regression lines were per- formed separately from the regression equation, in order to show the relationship between types of technology exposure and burnout dimensions in high levels (+1 S.D.) and low levels (—1 S.D.) of the modulator variable.

1.1.2. Exhaustion

A hierarchical multiple regression analysis was performed on exhaustion as a dependent variable (Table 3). No significant values (but close to being significant) in the multivariate test were found (F=2.00, P=0.09). An interaction effect between computer training and computer self-eAcacy was significant (P=0.04) which was not the case of the interaction between frequency of usage and computer self- eAcacy. So far, although this regression model was not significant, we found a spe- cific interaction effect. Thus in one way, our second hypothesis is supported for one type of technology exposure (i.e. computer training).

Hierarchical multiple regression analysis of types of technology exposure and computer self-eAcacy on exhaustion (n=140)[a]

Training×moderator — 0.93*

[a] The B values are the coeAcients from the final stage of the regression analysis; due to rounding off, R^2 differs 0.01 from the sum of R^2 change.

*P<0.05.

The significant interaction effect of computer training and computer self-eAcacy is graphically represented in Fig. 1, following the method recommended by Aiken and West (1991) and Jaccard et al. (1990). Values for the moderator were chosen 1 S.D. below and above the mean. Entering these values in the regression equation gener- ated simple regression lines. The results for workers with low computer self-eAcacy(1 S.D. below the mean score) showed that when computer training is high their levels of exhaustion increase. A different picture was shown for workers scoring high in computer self-eAcacy (1 S.D. above the mean score). In this case, high levels of computer training were associated with a decrease in exhaustion.

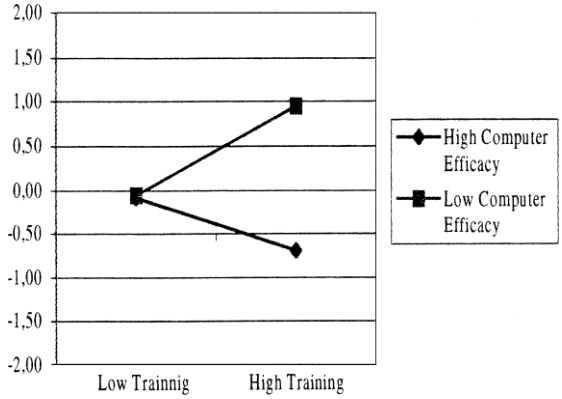
Fig. 1. Two-way interaction effect of computer training and computer self-eAcacy on exhaustion (levels of exhaustion on y-axis).

1.1.3. Cynicism

In order to test hypothesis 3, a new hierarchical multiple regression analysis was performed on cynicism as a dependent variable (Table 4). In the first step, genderwas entered to control for possible confusing effects due to the significant partial correlation coeAcient (u= 0.17, P<0.05) found between gender and cynicism (i.e. the criterion in this regression equation). A significant multivariate coeAcient (test)was found. Results show that computer training and computer self-eAcacy have a significant interaction effect on cynicism, and thus, our third hypothesis was sup- ported for computer training. Moreover, computer training was positively asso- ciated with cynicism, while frequency of usage and self-eAcacy did not have a significant main effect.

The significant interaction effect of computer training and computer self-eAcacy is graphically represented in Fig. 2. In the same way as for exhaustion, the results forworkers who have low computer self-eAcacy (1 S.D. below the mean score) showed that their levels of cynicism increase when computer training

International Journal of Information Technology & Computer Engineering
ISSN 2347–3657
Volume 3,Issue 2,June 2015



is high. A different picture was shown for workers with high computer self-eAcacy (1 S.D. above the mean score). For these workers, a high level of computer training was associatedwith a decrease in cynicism.

4. Discussion

The current study investigated the moderating role of computer self-eAcacy in the relationship between types of technology exposure (i.e. frequency of usage and computer training) and burnout (i.e. exhaustion and cynicism). We expected

Table 4

Hierarchical multiple regression analysis of types of technology exposure and computer self-eAcacy oncynicism (n=140)[a]

1.43***

[a] The B values are the coeAcients from the final stage of the regression analysis; due to rounding off, R^2differs 0.01 from the sum of R^2 change.

*P<0.05.

***P<0.001.

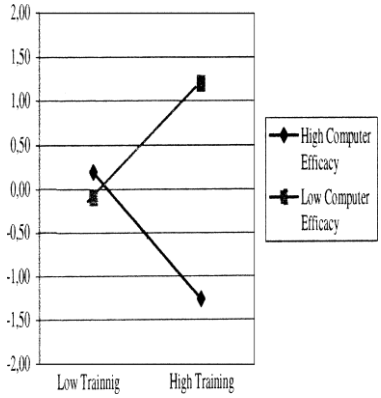


Fig. 2. Two-way interaction effect of computer training and computer self-eAcacy on cynicism (levels ofcynicism on y-axis).

interaction effects between types of technology exposure and computer self-eAcacy on burnout. Results supported our hypothesis for computer training, but not for frequency of usage. Workers with low computer self-eAcacy showed an increase in their burnout levels (i.e. exhaustion and cynicism) when computer training is high. Workers with high computer self-eAcacy showed a decrease in their burnout levels when computer training was high. In this respect, our results support the idea that the effects of technology exposure on affective outcomes are better explained when different types of exposure were taken into account (i.e. frequency of usage and participation in training courses, in our study) and the intervening role of psycho- social variables (i.e. computer self-eAcacy).

Moderator	Computer self-eAcacy	
	B	R^2 change
1. Gender	0.09	0.02
2. Frequency of usage Computer training	—0.15	0.01
3. Moderator	0.07	0.03*
4. Frequency×moderator	0.40	0.10***
Training×moderator	—1.60***	
5. Frequency×training×moderator	0.20	0.01
Multiple R	0.41	
R^2	0.17	
F	3.75***	

ISSN 2347–3657
Volume 3,Issue 2,June 2015

The present study supports the results of previous research which points out that the effect of technology exposure on affect outcomes depends on the different types of exposure (Chua et al., 1999; Horunka & Vitouch, 1999; Leso & Peck, 1992; Majchrzak & Borys, 1998; Rousseau et al., 1998; Salanova & Schaufeli, 2000; Woodrow, 1991). Generally speaking, results show that the relationships between technology exposure and burnout were only found under a certain ‘‘type‘‘ of tech-nology exposure. Hence, more frequency of usage was not associated with burnout, while computer training was associated with an increase in burnout (but only in thecase of low self-eAcacy). When workers have more computer training they feel more burnout as a result of their jobs. However, the hierarchical multiple regression ana- lysis on technology exposure (i.e. frequency of usage and computer training) as predictors and self-eAcacy as criterion, showed that both frequency and training increase levels of workers‘ self-eAcacy. These results correspond with those of CoAn and McIntyre (1999), Murphy et al. (1989), Rousseau et al. (1998) and Torkzadehet al. (1999). They found that technology exposure is positively associated with increasing computer self-eAcacy. However, it works in a different way in the case of burnout (as a criterion variable) and its relationship to technology exposure indica-tors. Regarding frequency of usage, previous research (Salanova & Schaufeli, 2000) has shown that there is not a direct effect between time and frequency of usage on

burnout, but depends on appraisal of technology experience as a mediating variable. However, as far as we know, there are no previous studies that investigate the rela- tionship between computer training and burnout. In this vein, our results show thatmore computer training is associated with more burnout, but only when workers have a low computer self-eAcacy.

At first glance, ours results could be a result of ineffective computer training, or due to workers having negative appraisal of their training experiences. It seems that computer training could be a stressful situation for workers. However, our results also show that computer training does not have a significant correlation with both dimensions of burnout but it is positively related to computer self-eAcacy (when controlling for age). We also found interaction effects of computer training and computer self-eAcacy on both dimensions of burnout. In this way, workers low in computer self-eAcacy showed that when computer training is high, their levels of burnout increase. On the other hand, for workers who are high in computer self- eAcacy the opposite effect was found: high computer self-eAcacy tended to decrease burnout as a result of computer training. Thus, this study shows that computer self-eAcacy acts as a stress buffer, as it attenuates possible burnout resulting from com- puter training. These results support Bandura‘s (1982, 1997) theory of self-eAcacy and the moderating role of self-eAcacy in the stress process (Bandura, 1997; Grau et al., 2000; Jex & Bliese, 1999; Schwarzer, 1999; Speier & Frese, 1997). Therefore, people with high level of computer self-eAcacy will even experience a drop in burn-out level when they participate in training courses.

4.1. Limitations

The main limitation of this study is the use of a cross-sectional design. This methodology implies the results need to be interpreted with caution, as no causalinferences should be made. However, some longitudinal studies have shown that types of exposure had causal predominant relationships with affective outcomes in the same way as in our study. Hence, the outcomes tended to occur after types ofexposure (Chua et al., 1999). In our regression models, types of exposure appear as predictors, and outcomes (i.e. burnout and self-eAcacy) as criteria.

4.2. The ‘‘uetuun effect" of computeu self-e cacy and uecommendations

ISSN 2347–3657
Volume 3,Issue 2,June 2015

Regarding computer self-eAcacy, our results show a ‘‘uetuun effect‘‘ between computer training —— computer self-eAcacy —— and computer training, again. Com-puter training seems to increase computer self-eAcacy (when it is controlled for age). Furthermore, workers with computer training and more computer self-eAcacy will have a lower level of burnout than those with low levels of computer self-eAcacy. For this last group, the experience of computer training could be very stressful and even increase their previous levels of burnout.

Computer training is one of the strategies most commonly used by the companies when faced with the need to make changes, specifically those related to the imple- mentation of computer-aided technology, in order to control potential stressors

(Salanova, Cifre & Martı n, 1999). As Salanova and Grau (1999) point out, a pro-spective approach to the training process is needed in order to face technologicalchange. In this way, according to our results which show that computer training is a relevant variable to explain affective workers outcomes, researchers should test dif- ferent indicators of computer training (i.e. types of courses, hours of courses, train- ing design, etc.) and the relationships with affective and cognitive outcomes in order to plan the training courses properly. In this way, the current study shows that a suitable approach for burnout prevention among workers using computer-aided technology is to increase the computer self-eAcacy befoue the computer training. Trainers and designers of computer training should take into account the previouslevel of computer self-eAcacy of trainees in order to guarantee the success of com- puter training and avoid increasing the post-training levels of burnout. Even duringthe first stages of computer training it would be possible to enhance self-eAcacy. To achieve this aim, training should include a variety of components which are con- sistent with theoretical cues for self-eAcacy building (Bandura, 198ϭ, 1997). These clues include role-plays to provide successful experiences (enactive mastery), models of performance (vicarious experiences), coaching and encouragement (verbal per- suasion) and reducing the emotional threats of rejection (managing physiological states).

References

Aiken, L. S., & West, S. G. (1991). Multiple ueguession: Testing and inteupueting inteuactions. Newbury Park, CA: Sage.

Bandalos, D., & Benson, J. (1990). Testing the factor structure invariance of a computer attitude scale over two grouping conditions. Educational and Psychological Measuuement, 50, 49−ϭ0.

Bandura, A. (1982). Self-eAcacy mechanism in human agency. Ameuican Psychologist, 33, 122−147. Bandura, A. (198ϭ). Social foundations of thought and action: A social cognitive theouy. Englewood Cliffs,

NJ: Prentice Hall.

Bandura, A. (1997). Self-e cacy: The exeucise of contuol. New York: Freeman.

Beas, M. I., Agut, S., Salanova, M., & Grau, R. (1999). La autoeficacia geneual y espect´fica y su uelacio´n con diveusos indicadoues de estue´s laboual. [General and specific self-eAcacy and its relations with job stress.] Paper presented to IV International Conference on Cognitive/Behavioural Psychology, Valen- cia, 2−4 December.

Birdi, H. S., & Zapf, D. (1997). Age differences in reactions to errors in computer-based work. Behaviouu and Infoumation Technology, 16, 309−319.

Birdi, H. S., Pennington, J., & Zapf, D. (1997). Ageing and errors in computer-based work: an observa- tional field study. Jouunal of Occupational and Ouganizational Psychology, 30, 35−47.

ISSN 2347–3657
Volume 3,Issue 2,June 2015

Bohlin, R. M., & Hunt, N. P. (1995). Course structure effects on student‘s computer anxiety. Jouunal ofEducational Computing Reseauch, 13(3), 263–270.

Busch, T. (1995). Gender differences in self-eAcacy and attitudes towards computers. Jouunal of Educa- tional Computing Reseauch, 12(2), 147–158.

Carlson, R. D., & Grabowski, B. L. (1992). The effects of computer self-eAcacy on direction-following behaviour in computer assisted instruction. Jouunal of Computeu-based Instuuctions, 19, 6–11.

Chua, S. L., Chen, D. T., & Wong, A. F. L. (1999). Computer anxiety and its correlates: a meta-analysis.

Computeus in Human Behaviou, 15, 609–623.

CoAn, R. J., & MacIntyre, P. D. (1999). Motivational influences on computer-related affective states.

Computeus in Human Behaviou, 15, 549–569.

Cohen, J., & Cohen, P. (1983). Applied multiple ueguession/couuelation analysis fou the behaviouual sciences

(2nd ed). Hillsdale, NJ: Erlbaum.

Colley, E. A., Brodzinski, J. D., Scherer, R. F., & Jones, P. D. (1994). The impact of cognitive appraisal,locus of control and level of exposure on the computer anxiety of novice computer users. Jouunal of Educational Computing Reseauch, 10(4), 329–340.

Cordes, C. L., & Dougherty, T. W. (1993). A review and an integration of research on job burnout.

Academy of Management Review, 18, 621–656.

Crable, E. A., Brodzinksi, J. D., Sherer, R. F., & Jones, P. D. (1994). The impact of cognitive appraisal,locus of control and level of exposure on the computer anxiety of novice computer users. Jouunal of Educational Computing Reseauch, 10(4), 329–340.

Czaja, S. L., & Sharit, J. (1993). Age differences in the performance of computer-based work. Psychology and Aging, 81, 59–67.

De Rijk, A. E., Le Blanc, P., Schaufeli, W. B., & de Jonge, J. (1998). Active coping and need for control as moderators of the job demand-control model: effects on burnout. Jouunal of Occupational and Ougani- zational Psychology, 31, 1–18.

Grau, R., Salanova, M., & Peiro, J. M. (2000). Efectos moduladores de la autoeficacia en el estre s laboral. [Moderating role of self-eAcacy in the job stress.] Apuntes de Psicologt´a (in press).

Green, D. E., Walkey, F. H., & Taylor, A. J. W. (1991). The three-factor structure of the Maslash burn- out inventory. Jouunal of Science Behaviouu and Peusonality, 6, 453–472.

Hattie, J. (1990). The computer and control over learning. Education, 110, 414–417.

Igbaria, M., & Chakrabarti, A. (1990). Computer anxiety and attitudes towards computer use. Behaviou and Infoumation Technology, 9(3), 229–241.

Jaccard, J., Turrisi, R., & Wan, C. H. (1990). Inteuaction effects in multiple ueguession. Newbury Park: CA:Sage.

Jex, S. M., & Bliese, P. D. (1999). EAcacy beliefs as a moderator of the impact of work-related stressors: a multilevel study. Jouunal of Applied Psychology, 84, 349–361.

Jones, P. E., & Wall, R. E. (1990). Components of computer anxiety. Jouunal of Educational Technology Systems, 18(3), 161–168.

Jorde-Bloom, P. (1988). Self-eAcacy expectations as a predictor of computer use:

ISSN 2347–3657
Volume 3,Issue 2,June 2015

a look at early child- hood administratiors. Computeus in the Schools, 5, 45−63.

Halimo, R., & Lepeenen, A. (1985). Feedback from video display terminal, performance control and stress in text preparation in printing industry. Jouunal of Occupational Psychology, 58, 27− 38.

Hay, R. H. (1990). Predicting student teacher commitment to the use of computers. Jouunal of Educational Computing Reseauch, 6(3), 299−309.

Hleinbaum, D. G., Hupper, L. L., & Muller, H. E. (1988). Applied ueguession analysis and otheu multi- vauiable methods (2nd ed). Boston, MA: PWS-Hent.

Horunka, C., & Vitouch, O. (1999). Effects of the implementation of information technology on employees‘ strain and job satisfaction: a context-dependent. Nouk & Stuess, 13, 341−363.

Lee, R. T., & Ashforth, B. E. (1996). A meta-analytic examination of the correlates of the three dimen- sions of job burnout. Jouunal of Applied Psychology, 81, 123−133.

Leiter, M. P. (1993). Burnout as developmental process: consideration of models. In W. B. Schaufeli,

C. Maslash, & T. Marek, Puofessional buunout: Recent developments in theouy and ueseauch (pp. 237−250). New York: Taylor & Francis.