

Differential Perspectives of Cyberloafing Activities About Computer Ethics among Employee

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Abstract

Cyberloafing is a non-work related online activity during working hours, which is also known as a modern form of counter-productive workplace behavior. Cyberloafing is not only affecting the productivity of companies, but also opens up doors for greater threats onto companies such as malware, data security breach, slower network performances, and others. Thus, it is no longer a new topic when various reports revealed that this activity is happening in almost all organizations around the world, including Malaysia. The purpose of this study is to examine the relationship between demographic attributes of an employee of one of the agencies in Malaysia and the ethics of computer usage about cyberloafing behavior. Simple random sampling was assigned to several 95 respondents from the agency. The accumulated data were then analyzed; descriptive statistics were used to interpret and evaluate the research outcomes. The findings of this study indicate that male gender, younger age employees, and employee of higher-level positions are more involved in cyberloafing than other group respondents. Yet, there is no significant relationship between the level of education and cyberloafing, as well as ethics and cyberloafing behavior. Hence, it's highly advisable to request from organizational leaders to introduce appropriate policies that help to manage employees' behavior toward cyberloafing.

Keywords: cyberloafing, ethics, demographics, gender, age, education level, position level, Malaysia

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■ 1.0 INTRODUCTION

In this 21st century, technological development is growing at a very fast pace, including the cyber world which has become part of our everyday lives. Internet and ICT which are the main component in the cyber world is widely used everywhere including the workplace. Internet and ICT are not just unavoidable at the workplace, but also essential to business growth and success. In this regard, employees are expected to use the internet and ICT facilities provided by companies effectively, ethically and in a proper manner. However, a lot of statistics showed otherwise.

According to Blanchard and Henle (2008), as employees become more common to internet access, they tend to use the internet for other non-work related jobs and entertainment. Voluntary acts of employees using the company's internet access and IT equipment for non-work related purposes during working time is known as Cyberloafing (Derya and Gulcin, 2012).

Cyberloafing is becoming very common in workplace and can be counter-productive. Employees tend to spend more time on the internet doing non-work related stuff and it could affect the productivity of the organization. Besides the negative impact on productivity, cyberloafing could cause detrimental effects on organizations as well. There is another potential collateral effect on IT infrastructure such as employee unknowingly downloaded viruses and malicious software by visiting the suspicious website, which will infect other computers and servers. PwC in 2015 reported that 73% of large firms in the UK had to face security breaches due to the employees' internet misuse. Cyberloafing could pose a serious threat to network security, strains organizational bandwidth and indirectly put employers vulnerable to lawsuits due to a variety of issues (Oswalt, Elliott-Howard, and Austin, 2003). Cyberloafing is considered counterproductive. This activity could detract employees from their works and lead to procrastination in completing their tasks thus reduced their productivity (Lim and Chen, 2012).

However, despite the negative effects of cyberloafing, studies revealed that employees could reduce stress among employees and also monotony environment at work as well as temporary relief for job demands (Anandarajan & Simmers, 2005).

According to the data by UpgradeMag (2015), 69% of employees said they waste time at work every single day and between 60 to 80% of people's time on the internet at work has nothing to do with work. 77% of the employees check their social media profiles from work computers while 77% of employed women plan their wedding while at work. It was found that 20% of men at work view pornography. Workers also are interrupted one every 10.5 minutes by tweets and IMs and every year, each user is costing his or her company nearly \$4,500. Those are just examples of cyberloafing statistics that were gathered in 2015, which might have become worst nowadays, considering the advancement in technology that we are experiencing today.

Every nation around the world is facing cyberloafing, including Malaysia. In Malaysia, the study showed that 23.8% of employee cyberloafing several times a day and 36.5% do it at least once a day (Koay et al., 2016). Malaysian Administrative Modernisation and Management Planning Unit (MAMPU), a Malaysia government agency under the Prime Minister Department found that, from 1st to 30th March 2011, there are 19.96 million accesses were made on the social networking websites by government employees in Putrajaya during working hours. Thus, MAMPU has published a guideline for the best practices in accessing media and social networking websites in the public sector.

There are many studies on the relationship between cyberloafing and demographics. Garrett and Danziger (2008) found that occupational status, perceived autonomy within the workplace income level, education, and gender were significant predictors of cyberloafing. Study on 393 Malaysia employees by Zauwiyah Ahmad in 2009 revealed that age and gender are two significant demographic predictors of attitudes towards cyberloafing. Another study on 260 public servants in Malaysia showed that male employees engage in cyberloafing more than female employees (Aminah and Zoharah).

Research also showed that men who are well-educated and work in a high-status field frequently use the personal Internet at work. It was shown that executives are more likely to cyberloafing compared to other types of workers (Ugrin et al., 2007). There are also studies showed that age is related to internet use (Jedwab, 2007; Banerjee & Hodge, 2007; Larsen and Sorebo, 2005). A study by Chak and Leung in 2004 found that educated people frequently engage themselves in the online search and those who less educated engage in online games more.

In 2009, Ahmad and Jamaluddin said that cyberloafing activities are considered a wrongful behavior by most of the Malaysian employees. However, it is still acceptable in the workplace (Ramayah, 2010). It was found that females are more ethical compared to males and tended to view cyberloafing as more wrong.

Thus, this study aims to examine the involvement of employees in cyberloafing activity and how demographics affected the ethics of computer usage in the relation of cyberloafing behavior. This study will be focusing on an employee in the agency in Malaysia. The outcome of this study will support the agency to develop a framework to mitigate the potential of cyberloafing activities among employees.

■ 2.0 LITERATURE REVIEW

The Internet is becoming critical in Knowledge Economy to optimize the capability of human capital, knowledge, and learning (Lytras and de Pablos, 2011). Internet benefits organizations in so many ways. Employees perform productively and efficiently with the Internet. However, the internet also has a 'dark side' and can affect organizations negatively. Internet abuse has become a challenge in organizations.

Generally, employees spend a lot of time on computers with internet connections to perform their tasks. However, sometimes they might use this technology for non-work related purposes during working hours. In recent years, the amount of time spent by employees on the Internet for personal purposes has increased (Blanchard and Henle, 2008).

Many types of research revealed that online shopping, blogging, gaming, instant messaging, gambling, booking vacations, viewing pornography, job hunting, personal emailing activity, general net surfing are among the most popular non-work related activities among employees (Lim, 2002; Vitak, Crouse, & LaRose, 2011; O'Neill, Hambley, & Bercovich, 2014).

These activities are known as cyberloafing (Kamins, 1995). Lim in 2002 defined cyberloafing as employee act of voluntary to use companies' internet access during working hours for non-work related purposes. Cyberloafing also can be described as a set of electronically-mediated engagement behavior that the supervisor would not consider as job-related (Askew, Coovert, Vandello, Taing, & Bauer, 2011).

A study on literature review found that there are a variety of approaches and definitions for non-work related internet activities in organization; this has resulted in inconsistent use of terminology, definitions, and labels (Weatherbee, 2010). Unproductive use of the internet in the workplace has found as a common thread among scholars in referring to this activity (Ugrin et al, 2008). Cyberloafing, cyberslacking and non-work related computing are among the most popular terms used in literature (Derya and Gulcin, 2012). Ugrin et al. in 2008 concluded that any time that employees waste on the Internet can be referred to as cyberslacking or cyberloafing. In this study, terms of cyberloafing are used to refer to any kind of non-work related activities during working hours.

A lot of studies revealed that cyberloafing is associated with various factors such as demographics. Cyberloafing activities were frequently found in younger workers (Vitak et al., 2011), males (Hargittai & Shafer, 2006; Jackson, Ervin, Gardner, & Schmitt 2001; Vitak et al., 2011; Weiser, 2000) and individuals with higher education levels, higher earnings and higher-status jobs (Garrett & Danziger, 2008).

2.1 Demographic and ethics

Gender

Gender has been found as an important factor in internet usage behaviors including cyberloafing. The research found that gender is significantly associated with cyberloafing behavior in which male employees loaf more than female employees (Lim & Chen, 2012; Jia, Jia, & Karau, 2013; Vitak et al., 2011; Aminah and Zoharah).

It was found that males tend to cyberloafing for leisure purposes and entertainment and they are relatively more confident in using the Internet than women (Jackson, Ervin, Gardner, & Schmitt, 2001). Men also found to involve in Internet activities in a longer period compared to women (Fallows, 2005; Ono & Zavodny, 2003; Teo & Lim, 2000). It was found that men engaged slightly over an hour a day in cyberloafing and women spend about 46 minutes in cyberloafing (Lim and Chen, 2012). Another statistic also showed that 12.2% more males engaged in cyberloafing than female employees (Frangos and Sotiropoulos, 2010). Therefore, men tend to experience greater internet abuse risk (Stavropoulos, Alexandraki, & Motti-Stefanidi, 2013). On the other hand, women are less likely to use the Internet due to the less positive attitude towards Internet use (Broos, 2005; Hargittai & Shafer, 2006). A study by Dileep, Normala, Govindarajo, & Othman (2014) among younger Malaysian employees found that men tend to use the internet for e-commerce more than women.

Examination of behavioral predisposition and religiosity and gender by Alan and Tse (2001) found that women employees are more ethical than their men counterparts. Other studies also found that female employees tend to be more ethical than males (Ahmad and Jamaluddin, 2010; Ibrahim and Angelidis, 2009). This indicated that gender influenced the unacceptability of unethical practices (Soheila et al. 2009).

Age

In the use of technology, it is always associated with age, which compared to the senior individuals; younger individuals are more likely to use a technology (Meyer, 2011; Eliasa et al., 2012). Age was found in various studies to be related to Internet use (e.g. see Jedwab, 2007; Banerjee & Hodge, 2007; Larsen and Sorebo, 2005).

Hasmdia (2009) found that age is one of the significant demographic predictors towards cyberloafing. Studies have shown that engagement in cyberloafing is higher among younger employees than older employees (Jia, Jia, & Karau, 2013, Vitak et al., 2011; Ahmad and Jamaluddin, 2009; Akman and Mishra, 2010; Jia et al., 2013). Ugrin et al. (2007) revealed that younger individuals tend to accept technology more and use the Internet more, thus it might become a habit when they enter a working environment which could lead to more frequent Internet use and abuse.

Despite the strong relationship between age and cyberloafing, studies linking age and cyberloafing still show weak and mixed results (Weatherbee, 2010). For example, Restuborg et al. (2011) found that older employee cyberloafing more than their younger counterparts. On the other hand, Ozler and Polat (2012) showed that age has no significant difference in cyberloafing behavior and Larsen and Sorebo (2005) found that age contributes negatively to Internet use.

However, individuals' ethical attitudes, beliefs, and behaviors are positively related to age as indicated in the most empirical studies (Conroy and Emerson, 2004; Deshpande, 1997; Kelly et al., 1990). The theory of moral development by Kohlberg (1975) expected that younger people are less ethical than older people. Other studies also supported that age does matter in ethical decision making (Peterson et al. 2001; Deshpande, 1997; Gupta, Swanson, & Cunningham, 2010; Honeycutt, Glassman, Zugelder, & Karande, 2001; Moores & Chang, 2006; Weeks, Moore, McKinney, & Longenecker, 1999).

Education

Garret and Danziger (2008) did a study on 1024 employees and found that gender is not the only demographics positively associated with cyberslacking, but income, educational level, and work autonomy are significantly related to it. With regards to the ethics, Rest (1994) found that a higher level of education individuals tended to demonstrate higher ethical sensitivity. Educated people are expected to be more ethical (Deshpande, 1997).

Occupational Level

Occupational status/level in the organization was significant predictors of cyberslacking (Garrett and Danziger, 2008). High-status occupations were associated with fewer work hours and have more leisure activity than lower-status occupations (Garrett and Danziger, 2008). Other studies supported that high-status workers arguably have more chances to take advantage of the Internet than individuals in the lower status job (Burris BH., 1993; Burris BH., 1998; Welman B et al., 1996). Garret and Danziger (2008) concluded that managers, professionals and those who are highly paid tend to spend more time online for personal purposes during working hours than those lower in the hierarchy at the workplace.

■ 3.0 THEORETICAL FRAMEWORK

Various studies showed a lot of interest in the area of IT ethics and common demographic factors such as gender, age, education, and experience are among the most current research on IT ethics (Kini, Ramakrishna, & Vijayaraman, 2004; Moores & Dhaliwal, 2003; Peslak, 2006; Vitell, 2003). Ibrahim and Mishra (2009) observed that awareness has a significant impact on ethical and moral attitudes towards the use of IT. According to Ajzen, 1985, most human behaviors are goal-directed behaviors. Therefore, it can be said that someone will technologically behave if he has the intention to do it. The act to behave according to the intention is influenced by the person's Attitude, Subjective Norms and Perceived Behavioral Control (Iosif et al., 2015) as shown in the figure below:

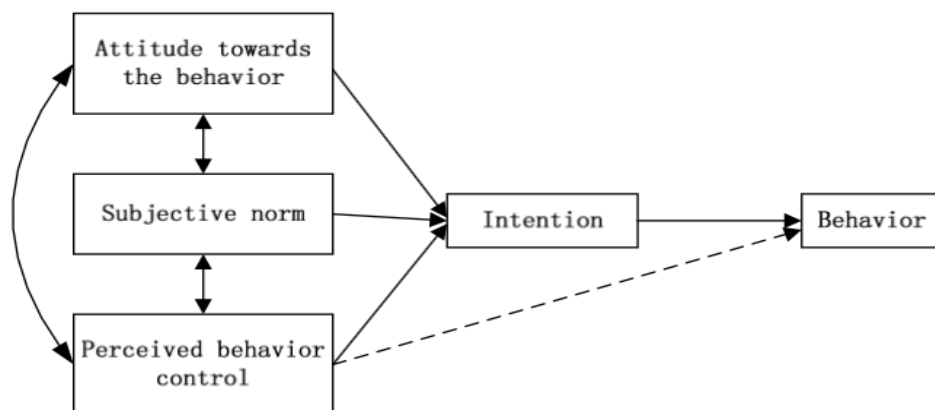


Fig 1: Theory of Planned behavior

The Attitude towards the behavior is actually the evaluation of the particular behavior's likely outcomes; the Subjective Norms relates to whether the social milieu approves or not the particular behavior as well as to which extent the individual is influenced by his/her societal surroundings; and, finally, the perceived behaviour control taps on the individual's perceived ability to perform the behaviour.' (Iosif et al., 2015, pg 59).

In this study, the Theory of Planned Behavior (TPB) adopted to further examined the relationship between demographic and cyberloafing and moderated by ethics. Various studies were found adopting TPB as a valid theory of cyberloafing (Lara et al. 2017; Ajzen, 1985; Henle, Reeve, & Pitts, 2010; Pelling & White, 2009). This is supported by a successful TPB model in examining technology-related behaviors such as instant messaging use (Lu, Zhou, & Wang, 2009), technology adoption (Mathieson, 1991), and use of social networking sites (Pelling & White, 2009). Besides that, studies also showed that this theory is appropriate in ICT contexts ((Banerjee, Cronan, & Jones, 1998; Chatterjee, 2008; Ifinedo, 2012; Leonard, Cronan, & Kreie, 2004; Namlu & Odabasi, 2007).

Based on the various literature review that supported the adaptation of PCB to study cyberloafing, a theoretical framework was developed based on PCB to examine the relationship between demographic and cyberloafing and moderated by ethics.

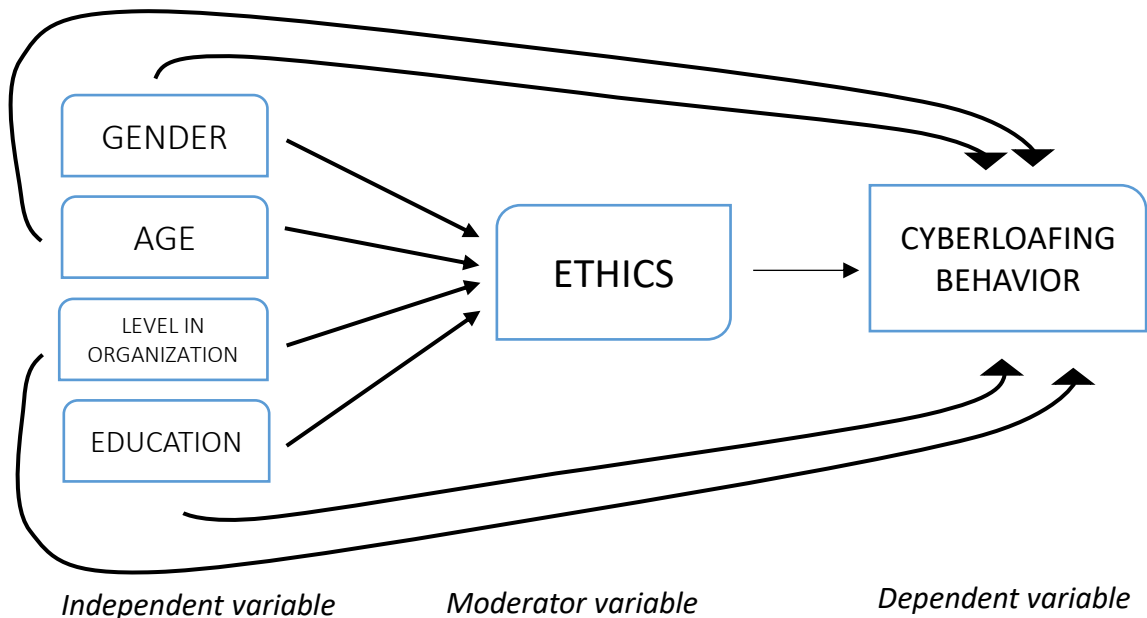


Fig 2: Theoretical Framework

■ 4.0 RESEARCH METHODOLOGY

This study was conducted by distributing a survey instrument in the form of an online questionnaire through google forms to the employee in the agency to gather primary data. The English version questionnaire was translated to the Malay language to cater to the needs of every background of employees and then was translated back to English for the analysis purposes. A random sample technique was used in this study and 95 respondents have completed the online questionnaire.

The questionnaire used in this study comprises of closed-ended questions. It was divided into 3 sections which are demographics (gender, age, education level, position level in the office) in Section 1. Section 2 is referring to ethics in cyberloafing and questions in Section 3 related to cyberloafing behavior. Section 2 was measured on Likert Scale of six points (totally not wrong, not wrong, slightly not wrong, slightly wrong, wrong and wrong) while Section 3 was measured on Likert Scale of five points (every time, most of the time, sometimes, rarely, and never).

The questionnaire was developed based on the previous studies and literature review on cyberloafing. Questions related to demographics were modified from Hosein et al., 2016. Hamida et.al, 2015; Lim and Teo, 2005; Lim, 2002; and Blanchard & Henle, 2008 were referred to in developing questions related to ethics and cyberloafing behavior.

SPSS version 24 was used to analyze the data and an independent sample t-test was conducted to examine the differences in cyberloafing behavior and ethics according to gender. Analysis of Variance (ANOVA) also used for other independent variables (age, level of education, position level at the office) to examine whether a difference exists in the means of the selected group towards ethics and cyberloafing behavior.

5.0 FINDINGS

5.1 Demographic

From 95 respondents, 70.5%, which is 67 respondents, are females and 29.5% (28) respondents are males. Demographic information showed that the largest group with 64.2% (61) falls under age 31 to 40 years old, followed by 21 to 30 years old (22.1%, 21), 12.6% (12) age 41 and above, and 1.1% (1) age 20 years and below. Professional or administrative officers comprise from grade 41 and above is the largest group with 62.1% (59) and the rest are supporting staff (grade 40 and below). Since the majority of the respondents are from professional and administrative officers, the largest group are higher education graduates with a degree (50.5%), Masters (51.5%) and Ph.D. (2.1%) while the rest with Diploma or SPM/STPM as highest education level.

5.2 Ethics

Group Statistics					
	Gender	N	Mean	Std. Deviation	Std. Error Mean
ethics	male	28	2.7107	.86681	.16381
	female	67	2.4269	.80276	.09807

Fig 3: Independent sample t-test for gender and level of ethics

Level of ethics between both genders was measured using independent sample t-test by comparing means of male and female with ethics. Calculated means for males are μ 2.7107 while females are μ 2.4269. It shows that males slightly more ethical than females though no significant difference observed.

ethics								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
20 and below	1	2.3000	.	.	.	.	2.30	2.30
21 to 30	21	2.7000	.73417	.16021	2.3658	3.0342	1.90	4.50
31 to 40	61	2.4377	.87277	.11175	2.2142	2.6612	1.00	4.50
41 and above	12	2.5667	.78432	.22641	2.0683	3.0650	1.30	3.90
Total	95	2.5105	.82777	.08493	2.3419	2.6792	1.00	4.50

Fig 4: ANOVA for age and level of ethics

ANOVA test was conducted to observe a significant difference between groups of age, groups of education level and groups of position level at the office with ethics. It was observed that employee age 21 to 30 years are more ethical in IT with a mean of μ 2.7000 followed by 41 years old and above (μ 2.5667). Though the

difference is not significant, it shows that employee age 21 to 30 years old is slightly more ethical than the other group of employees.

ethics

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
19-28	13	2.7077	.67511	.18724	2.2997	3.1157	2.00	4.10
29-40	23	2.7609	.91340	.19046	2.3659	3.1559	1.20	4.50
41-47	41	2.5463	.74903	.11698	2.3099	2.7828	1.00	4.40
48-53	18	1.9667	.79779	.18804	1.5699	2.3634	1.00	3.90
Total	95	2.5105	.82777	.08493	2.3419	2.6792	1.00	4.50

Fig 5: ANOVA for position level in the office and level of ethics

Whereas position level in the office is a concern, it was observed that employees in grade 29 to 40 have the highest mean with $\mu 2.7609$ if compared to others means this level of employees is more ethical than another level of employees. Interestingly, the least ethical level of employees is from professional or administrative officers at grade 48 to 53 with a mean of $\mu 1.9667$. Difference between the most ethical and least ethical level of employees is quite significant.

ethics

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
SPM/STPM	6	2.8500	.88261	.36032	1.9238	3.7762	2.00	4.10
diploma	19	2.7053	.96406	.22117	2.2406	3.1699	1.20	4.50
first degree	48	2.4146	.78902	.11388	2.1855	2.6437	1.00	4.40
masters	20	2.4800	.80368	.17971	2.1039	2.8561	1.00	4.10
PhD	2	2.2500	.49497	.35000	-2.1972	6.6972	1.90	2.60
Total	95	2.5105	.82777	.08493	2.3419	2.6792	1.00	4.50

Fig 6: ANOVA for education level and level of ethics

ANOVA tested for education level and level of ethics showed that employees with the lowest education level which is SPM/STPM are the most ethical with a mean of $\mu 2.8500$ followed by employees with a diploma ($\mu 2.7053$). The lowest mean with $\mu 2.2500$ hold by employees with Ph.D.

5.3 Behavior

Independent Sample t-test was used to compare means between gender and behavior. According to the test, males involve more in cyberloafing if compared to females. However, the difference is insignificant with males' mean of $\mu 3.9964$ and $\mu 3.9134$ is mean for females.

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
behavior	male	28	3.9964	.53088	.10033
	female	67	3.9134	.47733	.05832

Fig 7: Independent Samples t-test for gender and cyberloafing behavior

behavior

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
20 and below	1	4.3000	.	.	.	.	4.30	4.30
21 to 30	21	3.7667	.49430	.10787	3.5417	3.9917	2.60	4.60
31 to 40	61	3.9525	.48291	.06183	3.8288	4.0761	2.70	5.00
41 and above	12	4.1333	.49421	.14267	3.8193	4.4473	2.80	4.70
Total	95	3.9379	.49232	.05051	3.8376	4.0382	2.60	5.00

Fig 8: ANOVA for age and cyberloafing behavior

Meanwhile, ANOVA was used to examine the significant difference between groups of age and cyberloafing behavior. Employees at the age of 20 and below showed the highest mean of $\mu 4.3000$ and engage in cyberloafing more than the other group of age. Employees age 21 to 30 less engage in cyberloafing with means of $\mu 3.7667$.

behavior

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
19-28	13	3.9154	.34844	.09664	3.7048	4.1259	3.20	4.30
29-40	23	3.7000	.67014	.13973	3.4102	3.9898	2.60	4.90
41-47	41	3.9415	.38274	.05977	3.8207	4.0623	2.80	4.60
48-53	18	4.2500	.38540	.09084	4.0583	4.4417	3.60	5.00
Total	95	3.9379	.49232	.05051	3.8376	4.0382	2.60	5.00

Fig 9: ANOVA for position level in the office and cyberloafing behavior

The lowest mean of $\mu 3.7000$ is referring to the less engagement in cyberloafing behavior among employees grade 29-40. However, the professional or administrative officers with grade 48-53 significantly engaged in cyberloafing activities if compared to another level of employees.

behavior

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
SPM/STPM	6	3.8333	.38816	.15846	3.4260	4.2407	3.20	4.30
diploma	19	3.8474	.66363	.15225	3.5275	4.1672	2.60	4.90
first degree	48	4.0188	.48010	.06930	3.8793	4.1582	2.80	5.00
masters	20	3.8550	.36775	.08223	3.6829	4.0271	3.00	4.60
PhD	2	4.0000	.14142	.10000	2.7294	5.2706	3.90	4.10
Total	95	3.9379	.49232	.05051	3.8376	4.0382	2.60	5.00

Fig 10: ANOVA for education level and cyberloafing behavior

At the level of education and cyberloafing, there is no significant difference was observed among different groups of education level. Employees with SPM/STPM level is the least to engage in cyberloafing (mean= μ 3.8333) followed by diploma holder (mean= μ 3.8474).

6.0 CONCLUSION

This study is useful in providing further information to the agency on cyberloafing among their employees which could be important in developing policy or guidelines to prevent or reduce cyberloafing in the future.

Various literatures found that cyberloafing is a counterproductive work behavior and could cause a detrimental effect on organizations. It has been associated with various factors such as demographics. In this study, it was found that male employees cyberloafing more than females. This is similar to the previous findings by other researchers such as Hargittai & Shafer, 2006; Jackson, Ervin, Gardner, & Schmitt 2001; Vitak et al., 2011 and Weiser, 2000. This might be because of the confidence of men in the use of the internet if compared to women, thus they tend to cyberloafing more (Jackson, Ervin, Gardner, & Schmitt, 2001). On the other hand, women are less likely to use the internet because they have less positive attitudes toward the use of the Internet (Broos, 2005; Hargittai & Shafer, 2006).

ANOVA test on age group and cyberloafing found that a younger group of people cyberloafing more than the eldest. Previous literature also revealed that cyberloafing activities were frequently found in younger workers (Vitak et al., 2011). The past researchers have associated skills in IT as the reason for Internet abuse among the younger age group (Stavropoulos, Alexandraki, & Motti-Stefanidi, 2013).

Garret & Danziger, 2008 showed that higher-status jobs or higher-level position workers engage more in cyberloafing activities compared to the other group of workers. Findings in this study also supported Garret and Zandigar's which it was found that the professional or administrative officers with grades 48-53 among the highest level of worker significantly engaged in cyberloafing activities if compared to another level of employees. This might be due to the nature of work among this group of workers where they have to use the Internet more in completing their tasks. Spending more time on the internet might induce people to cyberloafing more (Maltem & Sacip, 2015).

However, in the highest level of education possessed by employees, there is no significant difference found between each group. The finding is contrary to the previous literature review where it was found that employees with higher education levels cyberloafing more. This could be due to the level of IT and Internet skills among people nowadays has improved a lot and basically, every level of people possessed a frequent level of IT and Internet skills regardless of educational level.

In terms of ethics and cyberloafing behavior, this study found that there are no significant relations between them where males found to be more ethical but engaged more in cyberloafing activities. This is similar to the age where younger employees are more ethical yet cyberloafing the most. However, the position level and educational level showed slight relations between ethics and cyberloafing behavior.

■ 7.0 RECOMMENDATIONS

Engagement among employees in cyberloafing activities has a significant effect on organizations and has increasingly become a pervasive problem. Thus, there is an urgent need for employers to formulate prevention-intervention policies to curb cyberloafing problems at the workplace. Employers should tackle this problem from many perspectives such as attitudes, ethics, rules, and regulations, etc.

Enhancing the ethical environment is seen as one of the effective approaches that can be done in the workplace. This can take place by conducting training programs and seminars which focus on reducing cyberloafing, in a time-based frequency, to create awareness and instill ethical manners among employees. Studies have shown that such an approach can be effective to reduce the misuse of computers (Banerjee et al., 1998). Kohlberg's Theory also said that education should affect morals. Thus, educating employees through this approach could reduce cyberloafing issues in the workplace.

Other than that, employers could develop policies, guidelines or codes of conduct on IT and Internet use at the workplace. According to Banerjee et al. (1998), the code of conduct is useful to be referred to as ethical guidelines when people face dilemmas and it was found effective. Creating internet usage policies is found moderately effective to deal with Internet abuse issues (Young, 2004). The study also found that creating the right working climate could reduce cyberloafing especially by achieving organizational justice (Zauwiyah & Hasmdia, 2009).

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