



An Investigation of Cyberloafing in a Large-Scale Technology Organization From the Perspective of the Theory of Interpersonal Behavior

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ABSTRACT

Employees in many organizations often spend time with information and communication technologies and engage in personal business instead of spending their time fully on work-related tasks. For some, such activities constitute inefficient use of time because they prevent employees from completing the tasks that they are responsible. For some others, cyberloafing behaviors help employees to reduce their stress and increase their efficiency. The purpose of this study was to examine the relationship of some organizational and individual variables with cyberloafing in the context of Interpersonal Behavior Theory. This mixed research study was designed with an explanatory approach. Quantitative data was collected from 240 employees; then by considering the quantitative data, interview questions were prepared and the qualitative data collection process was completed with 20 participants. According to the results; the perceptions of employees about the penalties and benefits that may emerge in case of cyberloafing affect their attitudes towards cyberloafing positively. Positive emotions for cyberloafing and social factors have a positive effect on cyberloafing intention. Social factors have a positive relationship with roles, rules and self-concept. Habits and intention increase employees' cyberloafing behaviors. The most frequent cyberloafing behaviors are messaging and reading news. The implications of the results are discussed.

Keywords: cyberloafing, technology-based communication, organizational behavior, communication management, theory of interpersonal behavior, cyberslacking

INTRODUCTION

In the last quarter century, there have been technological changes around the world that have spurred other major changes. One of these changes, Information Technology and the Internet, has become an inevitable part of both personal and professional life. In particular, organizations have taken action to use the potential offered by the internet to do business in nontraditional ways and to improve employee performance (Lim, 2002, p. 675). This has opened new horizons for many businesses that give ways to a global integration into the knowledge economy (Greenfield & Davis, 2002, p. 351). Although the internet has benefits such as reducing costs, shortening product cycle times, and facilitating information access and marketing services (Anandarajan, Simmers, & Igbaria, 2000); it also has difficulties such as "security weaknesses, privacy violation, negative internet use of employees, and internet addiction" (Johnson & Chalmers, 2007, p. 1). As access to the internet becomes widespread for employees, so does the tendency to use the internet for non-work-related

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behaviors such as entertainment (Blanchard & Henle, 2008, p. 1068). According to Anandarajan (2002), internet is not only an effective business tool, but also provides employees' access to "the world's largest playground".

Counterproductive behaviors can take various forms (Cullen & Sackett, 2003). This type of behavior, loafing, is a common problem that has plagued organizations since the beginning of organizations (Lim, 2002). The concept of cyberloafing was first described by Kamins (1995) in the article "Cyber-loafing: Does employee time online add up to net losses?" published in the *New York Daily News*. Lim (2002) is the first to examine it scientifically. Cyberloafing is "voluntary behavior in which employees during work hours use the company's internet for their individual purposes rather than for their work" (Lim, Teo, & Loo, 2002, p. 67). Such activities prevent employees from performing their actual work duties and lead to inefficient use of time. These behaviors include online shopping, blogging, gaming, instant messaging (Madden, 2009). In addition, behaviors such as online gambling, pornography, tracking of personal investments may also be mentioned (Pee, Woon, & Kankanhalli, 2008).

Employees perform cyberloafing for various reasons: boredom (Eastin, Glynn, & Griffiths, 2007), lack of control (Lim & Teo, 2005), lack of justice (Lim, 2002), group rules affirming personal internet use (Mahatanankoon & Igbaria, 2004), computer skills (Garrett & Danziger, 2008), job satisfaction (Vitak, Crouse, & LaRose, p. 1753). Such behaviors may have benefits such as stress reduction (Coker, 2011), regeneration and performance enhancement (Lim & Chen, 2012; Sonnentag, 2003), creativity (Anandarajan & Simmers, 2004; Oravec, 2002; Stanton, 2002). However, it can also cause density in computing resources, clog bandwidth and reduce system performance (Sipior & Ward, 2002), reduce efficiency (Malachowski, 2011), pose legal risks (Mills et al., 2001). Many studies have obtained different results regarding the cyberloafing time of the employees.

Cyberloafing is a common problem in today's organizations. With reports of the effects and costs of cyberloafing, the importance of organizations controlling such behavior is also revealed. If no action is taken, such small behavior performed by few people can cause internet abuse to become widespread and become a norm. However, cyberloafing can continue despite the measures to be taken (Jia, Jia, & Karau, 2013; Son & Park, 2016). It would be more beneficial for employees and the organization to understand and make regulations rather than a definitive ban. Excessive measures can reduce employee satisfaction and sense of justice, and can also affect retention of skilled employees and productivity (Case & Young, 2002). Therefore, a balance needs to be established. The following methods can be used in these arrangements (Ozler & Polat, 2012; Simsek & Simsek, 2019):

- Education and informing
- Computer usage policies
- Monitoring
- Influencing individual's ethical perceptions
- Punishment

THEORETICAL FRAMEWORK AND RESEARCH HYPOTHESES

Theory of Interpersonal Behavior (TIB) is particularly useful in explaining complex behaviors that may be influenced by the social and physical environment. Like Theory of Planned Behavior (TPB) and Theory of Reasoned Action (TRA), TIB is frequently used in research with its distinct characteristics in predicting behavior. TIB, while having elements of the other two models, reveals the power of prediction through habit, facilitating conditions, and some other additional factors. Including factors such as habit increases the predictive power of the model over other models (Bamberg & Schmidt, 2003; Woon & Pee, 2004). Triandis (1977) stated that interpersonal behavior is a multifaceted and complex phenomenon because in any interpersonal encounter a person's behavior is determined by what he/she thinks is appropriate in that particular situation.

Triandis' model (1977) is a three-level model. The first level includes personal traits and previous experiences shaping personal attitudes, beliefs and social factors related to behavior. The second level describes how attitude, affect, and social determinants and personal normative beliefs affect the formation

of intention towards a particular behavior. The third level predicts whether intentions, previous experience, and situational circumstances will make the person perform the behavior in question. Cognitive and affective components work together with social determinants and personal normative beliefs in the second phase of the model to predict their intention to act (Robinson, 2010; Triandis, 1980).

TIB is appropriate to address individual internet use. The use of the internet in the workplace is a social behavior learned mostly within the organization through the observation of the behavior of other employees (Simsek & Simsek, 2019). The employee may wish to use the internet for personal purposes. When faced with this situation, it looks for signals within the organization that behaviors will be rewarded or punished. The individual decides whether to participate in the behavior only after learning these rules (Moody & Siponen, 2013).

The following are the sub-dimensions of the theoretical framework of the study and relevant research hypotheses. The null hypotheses, as usual, indicate that there are no relationships between variables. Therefore, instead of mentioning so many null (H_0) hypotheses, alternative (H_1) hypotheses are presented under each sub-dimension.

Beliefs and Attitude

Beliefs are based on one's inner knowledge. Evaluation refers to the individual's internal calculation, which determines how relevant the belief is when creating an attitude in a particular situation (Fishbein & Ajzen, 1975, cited in Moody & Siponen, 2013, p. 325). In the context of cyberloafing, strict internet usage policy and severe disciplinary action can also deter employees from cyberloafing (Jia, Jia, & Karau, 2013).

Individuals seek to maximize benefits and minimize penalties. The perception of penalties associated with personal use of the internet will change future attitudes towards such behavior. Individuals have a reluctance for punishments and losses rather than rewards (Kahneman & Tversky, 1979, cited in Moody & Siponen, 2013, p. 326). Although benefits increase an individual's attitude to engage in a particular behavior, perceived penalties associated with this behavior will have a strong and negative impact on an individual's attitude toward the same behavior.

H1a: Perceptions of penalties have negative relationship with attitudes.

H1b: Perceptions of benefits have positive relationship with attitudes.

H1c: Attitude has positive relationship with intention.

Social Factors

Social factors are a combination of norms, roles, and self-concept, and have a power at the social level to influence an individual's intent toward a particular behavior (Limayem, Khalifa, & Chin, 2004). Triandis (1977) defined social factors as the culture of the individual's reference group and an assessment of the individual's specific interpersonal agreements with others in certain social situations. This means that people seek social acceptance. The power of social factors reflects the clarity of norms, roles, self-concept, and interpersonal agreements.

H2a: Norms have positive relationship with social factors.

H2b: Self-concept has positive relationship with social factors.

H2c: Roles have positive relationship with social factors.

H2d: Social factors have positive relationship with intention.

Affect

Triandis (1977) states that decisions made by an individual are generally not based on the cognitive aspects of a situation. In most cases, the emotions of the individual play an important role in the decision-making process. Affect articulates feelings towards a particular behavior such as pleasure, joy, joy, depression. These feelings can be positive or negative, pleasant or unpleasant, strong or weak (Triandis, 1977).

H3: Affect has positive relationship with intention.

Facilitating Conditions

According to the definition made by Triandis (1980), facilitating conditions refer to “environmental factors that make it easier to perform a behavior”. It is a concept that also refers to the ability of the individual to perform the action, the difficulty of the action, whether the individual has the knowledge needed to perform the action, and the environmental conditions that increase the behavioral possibility.

H4: Facilitating conditions have positive relationship with behavior.

Habit

Habit is a mental structure developed by repetition of certain actions or behaviors (Schneider & Shiffrin, 1977 cited in Yeik, Soh, & Chew, 2017, p. 4). According to the TIB model, repeating an action continuously makes it a habit. When employees use the internet on a daily basis without encountering any obstacles at work, this repetitive action becomes a habitual behavior. When behavior is habitual, the individual does not act rationally.

H5: Habit has positive relationships with behaviors.

Intention

According to TIB, intention is the conscious planned behavior of the individual. Intention represents the amount of effort an individual wishes to implement in order to try a particular behavior and perform the action (Triandis, 1980).

H6: Intention has positive relationships with behaviors.

Behavior

One of the fundamental constructs in the operational framework of the present study is behavior. Behaviors are characteristically the consequence of specific goals and intentions that an individual has. However, a behavioral intention is “the cognitive precursor of an action” (Triandis, 1977, p. 5).

METHOD

The study was carried out in the mixed research model with an explanatory sequential design. In the explanatory sequential design, first quantitative data and then qualitative data are collected and analyzed (Creswell & Clark, 2017). In this study, first quantitative data were collected via a Likert-type scale and then qualitative data were gathered through semi-structured interviews with the selected participants.

Quantitative Study

Sample

A private technology organization was selected for the study and data were collected from customer service employees via probability sampling. The data collection period lasted for four weeks in January and February, 2020. Cyberloafing behaviors need technological tools. It is necessary to consider such behaviors intertwined with technology. For this reason, a leading technology company in Turkey was selected as the organizational setting. Through this choice, it was aimed to address the situation of employees in the technology sector towards cyberloafing behavior. In this context, data were collected from 240 employees working in the customer relations and quality improvement department.

Of the total sample, 153 of the respondents were female (64%) and 87 (36%) were male. The higher number of women among the participants was due to the fact that majority of employees in the particular unit selected were female. Of the participants, 147 (61%) were single and 93 (39%) were married.

In order to use it in the analysis, the age variable is divided into five groups. There are 74 employees (30.8%) aged 25 and under; 45 employees (18.8%) aged 26-27; 35 employees (14.6%) aged 28-29; 43 employees (17.9%) aged 30-32 years; 43 employees (17.9%) aged 33 and over. It is seen that the highest segment of the participants were aged 25 and under; thus data to a great extent were collected from a mass of young people.

Instrument

The scale used as the data collection tool in the quantitative part of the study was originally developed by Moody and Siponen (2013) and used in a number of studies. Before adopting the scale, the authors' written permissions were obtained and then the scale was translated into Turkish. In this process, some items that were evaluated by the five-member expert panel as confusing and difficult to understand for participants were removed. Most of these omitted items were culturally unsuitable.

The final form of the Likert-type scale as used in the study consisted of 51 items under 11 factors. The factors had a different number of items. Each item included a statement and five possible options that ranged from Strongly Disagree (1) to Strongly Agree (5). The critical value to decide high versus low cyberloafing was taken as 3.41, dividing the possible score range (4) by the number of responses (5). The mean score above the critical value meant that the participants exhibited a high level of cyberloafing.

Measurement model

Cronbach Alpha coefficients were calculated separately for sub-factors and for the overall scale. Social factors, affect intention, norms, habit, roles, attitude had alpha values of at least 0.80 and above; penalties, benefits and behavior had alpha values of at least 0.70 and above. The self-concept had an alpha value of 0.64. The highest alpha value was found for intention (.94) whereas the lowest alpha value was found for self-concept (.64). The Cronbach's Alpha value for the whole scale was calculated as .93. All these reliability coefficients are considered acceptable (Griethuijsen, Eijck, & Boujaoude, 2015).

EFA was used to evaluate construct validity of the scales. The results of analysis, items with problems in their distribution, cross loading, with factor load below 0.30 were removed from the scale. Remaining items loaded strongly on their factors. CFA provides information regarding the relationship between the items determined by exploratory factor analysis and the values to be used to explain the model fit (Hair et al., 1998; Pett, Lackey, & Sullivan, 2003; Tabachnick, Fidell, & Ullman, 2007). **Table 1** indicates that all items show loadings greater than 0.60. When evaluated in the context of Hair et al. (1998) opinions, factor loadings higher than 0.50 are quite significant. Convergent validity is also high since factor loadings were statistically significant, as Anderson and Gerbing noted (1988). Average variance extracted-AVE values and composite reliability (CR) values were also obtained. All CR and AVE values were appropriate when considered in this context (Fornell & Larcker 1981).

Procedures

Likert-type scale as the data gathering instrument in the quantitative phase of the study was administered to the participants in a face-to-face situation. One of the researchers spend a week in the organization to collect data. Following the explanations about the study, answering their possible questions, obtaining their consents, the scale was given to the participants in a meeting room they were invited as a small group and then they responded to the items on the scale. This process continued until the last participant completed the scale.

Qualitative Study

Participants

By analyzing the results from the quantitative phase, issues to be addressed in the qualitative phase were determined. Semi-structured interviews were conducted with 20 participants to learn and discuss their opinions on similar and different topics. A gender-wise balanced distribution was created, with 10 of the participants interviewed being male and the other 10 being female.

Interview form

More in-depth information about the results obtained in the quantitative part of the research was sought. The interview form used in semi-structured interviews with the participants consisted of 9 questions. Each question contained some sub-questions or follow-up items according to the answers given.

The descriptive analysis approach was preferred in the evaluation of the results of the interview. In this approach, the data obtained is evaluated according to the themes emerged. The data was handled according

Table 1. CFA Results

Factors	Factor means	Item numbers	Item means	Std. dev	Loadings	Critical ratio	Std. errors
Penalties	3.17	Pen1	3.51	1.29	0.75	8.68	.083
CR*= .786		Pen2	3.04	1.35	0.85	8.86	.087
AVE**= .555		Pen3	2.95	1.36	0.61		.088
Norms	1.93	Norms1	2.10	1.16	0.90	18.22	.074
CR= .872		Norms2	2.05	1.10	0.92	19.09	.071
AVE= .523		Norms3	1.77	1.04	0.72	13.00	.067
		Norms4	1.82	1.06	0.84		.068
Roles	2.69	Rol1	2.72	1.25	0.81	15.57	.080
CR= .882		Rol2	2.81	1.27	0.85	16.47	.082
AVE= .715		Rol3	2.52	1.18	0.87		.076
Affect	2.57	Affect1	2.35	1.21	0.85	20.56	.078
CR= .927		Affect2	2.76	1.32	0.90	23.90	.085
AVE= .810		Affect3	2.62	1.31	0.94		.084
Intention	2.16	Int1	2.14	1.10	0.91	20.85	.071
CR= .939		Int2	2.12	1.10	0.95	22.87	.071
AVE= .838		Int3	2.22	1.15	0.88		.074
Social factors	2.48	Sf1	2.20	1.17	0.77	12.48	.075
CR= .872		Sf2	2.55	1.26	0.90	14.43	.081
AVE= .684		Sf3	2.69	1.27	0.80		.082
Attitude	3.01	Att1	3.36	1.23	0.66	11.29	.079
CR= .861		Att2	2.90	1.14	0.94	17.26	.073
AVE= .679		Att3	2.77	1.22	0.84		.078
Habit	2.31	Hab1	2.14	1.18	0.74	13.52	.076
CR= .807		Hab2	2.25	1.15	0.65	11.46	.074
AVE= .439		Hab3	2.42	1.28	0.87		.082
		Hab4	2.45	1.30	0.85	17.07	.084
Benefits	1.99	Ben1	2.15	1.12	0.88		.072
CR= .727		Ben2	1.82	1.16	0.62	7.41	.075
AVE= .386							
Self concept	2.37	Sc2	2.23	1.19	0.62	7.25	.076
CR= .647		Sc3	1.98	1.16	0.76		.075
AVE= .320							
Behavior	1.99	Beh1	1.83	1.08	0.74	9.36	.070
CR= .734		Beh2	2.15	1.15	0.78		.074
AVE= .386							

to the themes generated by the research questions. Quotations are often made from interviewees to present the responses concisely. The responses are directly presented when appropriate (Bailey, 2008; Ozdemir, 2010; Patton, 2015).

RESULTS

Quantitative Results

Demographic results

In the earlier items of the scale the participants were asked to indicate their personal cyberloafing durations. Participants were also asked to specify their co-workers' estimated cyberloafing durations. When looking at the findings, the average time stated by the participants for themselves is 0.7 hours. The average of the durations the participants stated for themselves (M=0.7) are lower than the averages of the durations they stated for their co-workers (M=1.18). Considering that the participants work for six days a week, it is possible to achieve weekly cyberloafing durations multiplied by six.

Table 2. Cyberloafing durations

		n	%
Daily cyberloafing duration (m=0.7 hours)	Never	43	17.9
	≤1 hours	89	37.0
	1-2 hours	102	42.5
	3-4 hours	6	2.6
Colleague's daily cyberloafing duration (m= 1.18 hours)	Never	58	24.2
	≤1 hours	45	18.7
	1-2 hours	106	44.2
	3-6 hours	31	12.9
Weekly cyberloafing duration	Never	43	17.9
	≤3 hours	44	18.3
	3-6 hours	124	51.6
	7-24 hours	29	12.2
Colleague's daily cyberloafing duration	Never	58	24.2
	≤3 hours	42	17.5
	4-9 hours	65	27.1
	10-36 hours	75	31.2

Table 3. Effectiveness of cyberloafing measures

Degree of effectiveness	Physical proximity	Monitoring	Policy	Educate	Penalties	Blocking
Most effective	74	48	16	28	36	123
2. effective	26	36	42	30	58	64
3. effective	40	43	42	41	31	35
4. effective	44	40	54	43	31	8
5. effective	24	26	60	39	45	10
Least effective	32	47	26	59	39	123
Total	240	240	240	240	240	240

The t-test was applied to test the relationship among the employees' cyberloafing durations and their gender and marital status. Marital status ($p=.449$) and gender ($p=.926$) had no significant relationship with cyberloafing durations. ANOVA was conducted to test whether there was a significant difference between the age groups of the participants and their cyberloafing time. The results show no relationship between age groups and cyberloafing durations ($p=.262$).

The participants were asked about the measures that would be most effective in preventing personal internet usage, i.e., cyberloafing behavior, when detected. Employees were asked to rate the most effective measure as "1" and the least effective measure as "6" using each figure once. The clearest concentration in employees' responses to the six types of prevention is on the blocking measure. In other words, employees think that the most effective measure for cyberloafing would be blocking. Physical proximity can also be considered as another type of measure that can be used.

There are many cyberloafing behaviors in studies. Ten cyberloafing behaviors were identified in the context of this research. The highest averages in responses are in messaging and news reading behaviors. Other values are also seen in [Table 4](#). The relationship between these behaviors and demographic variables has also been analyzed. The results of the t-test analysis showed significant differences in listening to music, browsing sports sites, searching for personal information online, sending personal emails and arranging their travels online. Males are more likely than females to navigate sports sites, search for personal information, send personal emails and arrange their travels online ($p<.05$).

Table 4. Types of cyberloafing behaviors and demographic variables t-test results

	Means by sex	p	Means by marital status	p
Listen music (m= 2.98)	Female = 2.75 Male = 3.37	.001	Single = 2.98 Married = 2.97	.966
Read news (m= 3.14)	Female = 3.07 Male = 3.26	.294	Single = 3.11 Married = 3.19	.656
Internet for fun (m= 2.14)	Female = 2.10 Male = 2.20	.521	Single = 2.26 Married = 1.94	.037
Browse sport sites (m=1.88)	Female = 1.66 Male = 2.28	.000	Single = 1.89 Married = 1.87	.847
Messaging (m=3.21)	Female = 3.11 Male = 3.39	.135	Single = 3.29 Married = 3.09	.279
Visit SNS (m=2.66)	Female = 2.64 Male = 2.70	.743	Single = 2.85 Married = 2.36	.008
Search personal information (m= 2.45)	Female = 2.31 Male = 2.68	.022	Single = 2.40 Married = 2.51	.506
Play games (m=1.40)	Female = 1.39 Male = 1.42	.726	Single = 1.41 Married = 1.38	.765
Personal e-mail (m=2.03)	Female = 1.88 Male = 2.31	.000	Single = 2.01 Married = 2.07	.711
Make travel arrangements online (m=2.36)	Female = 2.05 Male = 2.89	.008	Single = 2.31 Married = 2.43	.522

Table 5. Fit indices

Goodness-of-fit	Recommended Values	Structural Model	Measurement Model
$\chi^2/\text{degree of freedom}$	≤ 3	1.808	1.719
P		.000	.000
Goodness-of-fit (GFI)	≥ 0.80	0.837	0.850
Adjusted goodness-of-fit (AGFI)	≥ 0.80	0.799	0.803
Normalized fit index (NFI)	≥ 0.80	0.871	0.886
Comparative fit index (CFI)	≥ 0.90	0.937	0.948
The Tucker-Lewis Index (TLI)	≥ 0.90	0.927	0.934
Incremental Fit Index (IFI)	≥ 0.90	0.938	0.947
Root Mean Square Residual (RMR)	≤ 0.08	0.080	0.065
Root mean square error of Approximation (RMSEA)	≤ 0.10	0.058	0.055
Standardized root mean square residual (SRMR)	≤ 0.08	0.072	0.050

According to marital status, significant differences were obtained in internet for fun and visiting SNS. Employees who are single are more involved in SNS and internet for fun ($p < .05$) than the married ones. According to the ANOVA results, the behaviors that differed in age groups were messaging and social networking ($p < .05$).

Structural model

The fit indices comparisons and acceptable values for both the measurement model and the structural model can be seen in [Table 5](#) (Hair et al. 1998; Hooper, Coughlan, & Mullen, 2008; Hu & Bentler, 1999; Kline, 2005; Tabachnick, Fidell, & Ullman, 2007).

In the model, there are effects of penalties and benefits on attitudes. Penalties have significant negative effect on attitude ($\beta = -0.43$, $p < .001$). The effect of the benefits are positive and significant ($\beta = 0.95$, $p < .001$). Another important factor in the model is social factors. This factor is predicted by norms, self-concept and roles. The rules have significant effect on social factors ($\beta = 0.23$, $p < .05$). Self-concept affects social factors significantly ($\beta = 0.33$, $p < .001$) and roles affects social factors significantly ($\beta = 0.35$, $p < .001$).

Intention is another factor in the model. This factor is predicted by attitude, affect and social factors. Social factors have a significant effect on intention ($\beta = 0.32$, $p < .001$) and affect ($\beta = 0.47$, $p < .001$). Although the effect of attitude, which is the last factor affecting intention, is negative and ($\beta = 0.08$, $p > .05$) not significant. The behavior is associated with intention and habit in the model. Intentions and habits have a significant effect on behavior. Intention has a significant effect on behavior with a value of ($\beta = 0.38$, $p < .001$). The effect of habits on behavior is significant with a value of ($\beta = 0.46$, $p < .001$).

Table 6. Direct effects

H	Path	Std. estimates	Unstandardized estimates	Critical ratio	Std.Err.	p	S/NS
H1a	Penalties→Attitude	-.429	-.412	-4.161	.099	***	S
H1b	Benefits→Attitude	.951	1.086	4.477	.243	***	S
H1c	Attitude → Intention	-.089	-.109	-1.348	.081	.178	NS
H2a	Norms→ Social factors	.231	.259	3.076	.084	.002	S
H2b	Self-concept → Social factors	.328	.433	3.730	.116	***	S
H2c	Roles→ Social factors	.348	.325	4.321	.075	***	S
H2d	Social factors→ Intention	.317	.313	4.238	.074	***	S
H3	Affect → Intention	.472	.454	6.347	.071	***	S
H5	Habit → Behavior	.459	.307	5.521	.056	***	S
H6	Intention → Behavior	.378	.290	4.827	.060	***	S

Table 7. Indirect effects

Indirect effects	Std. coefficient	p	Result
Penalties>Attitude>Intention	0.063	0.082	NS
Penalties>Attitude>Intention> Behavior	0.063	0.057	NS
Benefits >Attitude>Intention	-0.048	0.072	NS
Benefits >Attitude>Intention> Behavior	-0.048	0.057	NS
Norms > Social factors > Intention	0.080	0.013	S
Norms > Social factors > Intention> Behavior	0.080	0.009	S
Self-concept > Social factors > Intention	0.107	0.003	S
Self-concept > Social factors > Intention> Behavior	0.107	0.002	S
Roles > Social factors > Intention	0.119	0.017	S
Roles > Social factors > Intention> Behavior	0.119	0.011	S
Social factors > Intention> Behavior	0.125	0.001	S
Attitude > Intention > Behavior	-0.045	0.061	NS
Affect > Intention> Behavior	0.180	0.000	S

Detailed data on SEM results are also shown in [Table 6](#). According to the results, only Hypothesis 1c (H1c), which claims a relationship between attitude and intention, was not supported. All other hypotheses, which claim significant relationships among various factors, were proven to be true. Indirect effects according to SEM results are seen in [Table 7](#).

The MANOVA test was used to test whether there was a relationship between demographic variables and eleven factors in the model. The reason for not using ANOVA for each variable here was to avoid Type 1 error. There must be more than one dependent variable for MANOVA to be run. However, the assumption should not be arbitrary. Theoretical literature should allow to handle these factors together (Pallant, 2001).

At this point, in order to avoid Type 1 error, Bonferroni adjustment was made and the significance value was made tighter (.05/11=.004). First, gender and model factors were evaluated together. MANOVA Pillai's Trace results show that there is only significant differences between male ($M=2.21$) and female participants ($M=1.78$) for norms factor [$F(11,228) = 2,22, p<.05$, Pillai's Trace=.097, $np2=.097$]. There are no significant differences between marital status [$F(11,228) = 1,44, p=.156$, Wilks' Lambda=.935, $np2=.065$] and age groups [$F(44,862) = 5,29, p=.075$, Wilks' Lambda =.778, $np2=.061$] and model factors.

Qualitative Results

In the qualitative part of the study, some themes were generated in interviews with the participants. These themes (see [Figure 1](#)) are as follows: cyberloafing durations, breaks, behavior types, blocks, cyberloafing purposes, negative effects, prevention methods, most loafing groups.

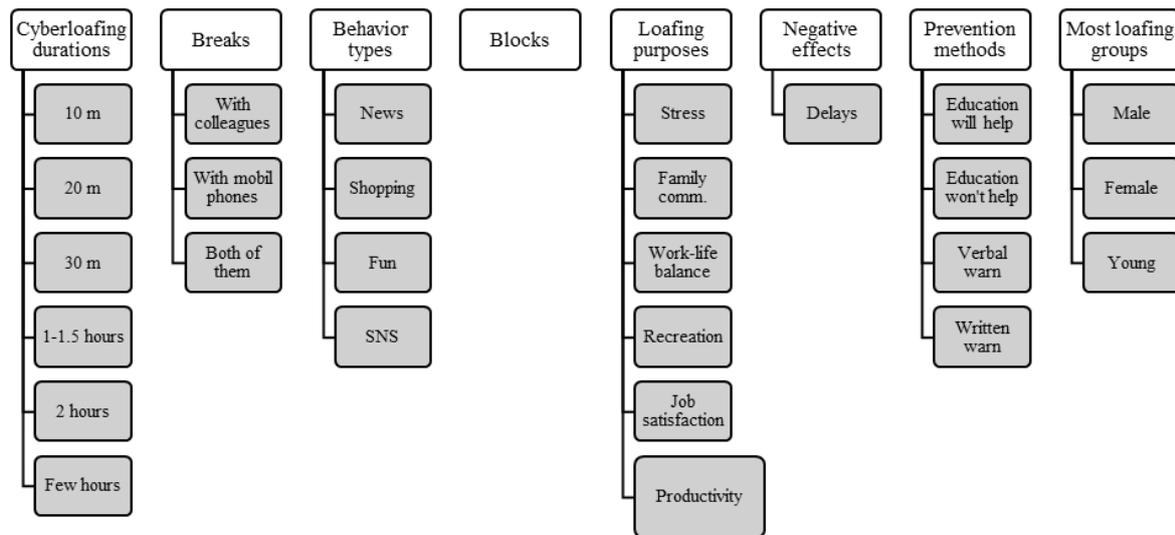


Figure 1. Themes and sub-themes

Participants were asked about cyberloafing durations in their workplaces and which devices they used. Participants indicated periods of 10 minutes, 20 minutes, half hour, 1-1.5 hours, 2 hours: “Half an hour per day. I don’t use the company’s computer. I’m going online on my cell phone. I think my friends use it as much as I do. Based on my observations” (K2). In addition to working hours, most of the free time now passes online. During breaks, employees find themselves with mobile phones in their hands. It is stated by the participants that this time spent covers most of the breaks: “We are mostly online during lunch and breaks” (K17).

Employees can show many online behaviors in their workplaces. These behaviors stated by the participants are *messaging*: “When I’m at work during the day, I look at a message from a work-related group. And rarely do I get a message from my friends” (K6); *social media*: “Social media in general; news sites, some blogs I follow, personal development sites, I look at them. But mostly social media” (K9); *news*: “I follow the news, the technology and the agenda” (K3); *shopping*: “it’s a few hours a day for shopping” (K14).

There are those who prefer to stay away from technology and take care of work. These preferences originate from themselves as well as from the organization. Because the organization blocks access to certain sites such as social networks: “We can use phones. We have access to the internet on computers but most sites are already blocked” (K6).

There may be many goals for employees who exhibit cyberloafing behavior. In the responses of the interviewees, it is seen that their work is stressful and that they sometimes feel the need to relax: “Sometimes you get nervous because we communicate with customers. Some calls make you nervous. However, when you spend time on social media, you can forget and return to work effectively. It reduces stress and increases productivity” (K1).

It can be emphasized that communication with the family is also important, especially for those who have baby: “I have a baby. They text me about home and I look at it” (K20). Participants’ responses show that spending time on platforms such as social media can prevent workplace tensions, reduce stress, free their mind, and increase their productivity by browsing entertainment content: “We laugh a bit, relax... communicate with our families ... our job satisfaction increases”(K4). Another employee who did not find it useful to be restricted and emphasized the benefits of cyberloafing is as follows: “We also have access to different ideas through access. Our vision is expanding. This is a learning process. It’s not right to be restricted. We can think of it as commercial break” (K9).

Although cyberloafing can provide some benefits to employees, it can also have some negative effects. Works may be delayed or the quality of the work may be reduced. There may be a decrease in the number of calls answered: “We have certain speaking time. If he spends too much time on the internet, he can’t focus

and the call time gets longer" (K3). There are employees who are aware of the risks that may arise after cyberloafing, and they state that productivity risks will arise when their virtual behavior becomes excessive: "When this exceeds a certain amount of time, it will first adversely affect your work and this will also harm the company" (K2).

The measure that can affect cyberloafing behavior most is blocking sites that are not thought to be work-related. It is the opinion of the participants in the study that training and policies in the workplace can also be effective. Blocks are seen by employees as the most important measure: "I would first block access, as it is now. Or you can't make people do it even if you tell them" (K15).

Organizations can impose various penalties against cyberloafing behavior. Employees' views on sanctions are that the behavior should be corrected with a warning; if repeated, there should be tougher sanctions. Employees feel that there needs to be a distinction between innocent behavior and more serious or illegal behavior: "First of all, warning. I would have warned him a few times. First a verbal warning, then a written warning, and if he did it again, I would have done his job" (K13). Participants have different views on the effects of education. Some participants think it would be helpful to provide training if they were in charge: "There should definitely be education. I think it can be useful in every way when we teach it to use consciously" (K4). Some participants disagree: "I don't think it can change the person who becomes addicted through training" (K15).

DISCUSSION AND IMPLICATIONS

Employees engage in cyberloafing behavior at varying times. The daily average of the participants was 0.7 hours. Hartijasti and Fathonah (2015) considers less than four hours a week cyberloafing low; between four hours and ten hours moderate; ten hours and more intensive. Weekly average time for cyberloafing in the present study were found to be 4.41 hours. This suggests that moderate cyberloafing is performed by employees. There was no significant relationship between these cyberloafing durations and demographic variables. The daily average of employees' responses to their co-workers' cyberloafing behavior is 1.18 hours (approximately 7.08 hours per week). This is much more than what they have specified for themselves. It appears that individuals tend to show less of their own negative behavior.

Previous research reported that physical proximity may reduce cyberloafing (Aku, 2017; Zoghbi-Manrique-de-Lara, & Mesa, 2010; Zoghbi-Manrique-de-Lara, Verano-Tacoronte, & Ding, 2006). The fact that 30% of participants cited physical proximity as the most effective measure. Participants who are office workers may choose not to participate in cyberloafing when they are visible to their managers. Companies are able to tell their employees the correct use they want with their policies, training and rules (Henle, Kohut, & Booth, 2009; Mirchandani & Motwani, 2003). Responses show that policies are not very effective because 15% of employees think that policies will be the most effective solution, 11% of employees see training as the most effective solution, while 24% see training as the least effective solution. Employees do not think that training can be very effective on cyberloafing behavior. Similar results are seen in interview responses. One of the methods that managers use to prevent cyberloafing is blocking unwanted websites and applications (Young, 2010). Both quantitative and qualitative responses advocate blocking for its effectiveness on preventing cyberloafing.

It is observed that male employees are more engaged in the behavior of listening to music, browsing sports sites, searching for personal information online, sending personal emails and arranging their travels online. From these points of view, the expected results have been achieved especially in browsing sports sites. The difference in this behavior can be explained when it is thought that males have an interest in sports sites, especially football. The arrangement of the travels by males can be explained by the fact that economic behavior in the Turkish family is mostly performed by men.

In terms of marital status, singles are more likely to participate in internet for fun and social networking. Making friends and "flirt" in particular are made more by singles. Doing such efforts on social networks may explain the fact that singles are more likely to visit social networking sites. In addition, singles have less responsibilities than married.

The results of the analysis between behavior types and age groups showed significant differences in messaging and social networking behavior. It is highlighted in many studies that young people are more active in social networks and messaging (Simsek, Elciyar, & Kizilhan, 2019). Young people who engage in online interactions and relationships, both with their social circle and friends, continue to do so during work hours.

Employees generally try to minimize the penalties and maximize the benefits in the workplace. They are naturally reluctant toward penalties. Beliefs about potential future outcomes motivate to show a particular behavior (Bandura, 1977 cited in Moody & Siponen, 2013, p. 326). Attitudes will be positive if the individual brings benefits to the forefront, while penalties will be negative if they are in the forefront. From the point of penalties, employees can receive warnings, reprimands or internet can be restricted. The benefit consists of titles such as free time acquisition, reduction in internet payments. In SEM, penalties have a diminishing effect on attitudes toward cyberloafing. Although benefits increase an individual's attitude toward behavior, perceived penalties will have a stronger and negative impact on an individual's attitude toward the same behavior.

Triandis (1977) views social factors as related to the culture of the individual's reference group and the specific interpersonal agreements that the individual makes with others. According to TIB, social factors should be considered together, not separately. Social factors are predicted by a combination of three factors; norms, roles, and self-concept. These three factors have a power at the societal level that can influence an individual's intention toward a particular behavior (Limayem, Khalifa, & Chin, 2004). All three factors are expected to have a positive relationship with social factors. People try to behave in accordance with the expectations of their environment and their own self and role, and sometimes to create a balance. The results of this study also confirm that social factors are predicted by roles, self-concept, and norms.

When employees experience a behavior, they may have feelings of fun, joy, happiness, depression, discontent, or hatred. From this point of view, affect is a factor that may increase the employees' cyberloafing intentions. Research also have results that confirm this (Moody & Siponen, 2013; Woon & Pee, 2004). In light of the results, employees who find cyberloafing behaviors funny, enjoyable and relaxing are also more likely to have cyberloafing intentions.

Human is a social kind and their behavior can be shaped by the social circle they are in. Expectations of their circle and whether they find their behavior appropriate can be a guide on individual behaviors. They are able to participate more easily and frequently in behaviors that their circle deems appropriate. So social factors and affect play an important role in forming intentions toward a particular behavior (Jackson, 2005). However, the relationship between attitudes and intentions was not found as expected. The results show a nonsignificant relationship. Although employees have positive attitudes and the benefits of cyberloafing, both the intensity of their work and the preventive strategies implemented by the organization can be effective on their cyberloafing attitudes.

Another factor to be considered in the research model is evaluating cyberloafing behavior itself. The behavior is predicted by intention and habit. As these behaviors are repeated, they can become a habit. Therefore, habits have a relationship with cyberloafing (LaRose, Lin, & Eastin, 2003). Behavior will be more intense when intentions and habits coexist (Gagnon, Sanchez, & Pons, 2006). The results of the current study also confirm this relationship.

LIMITATIONS AND RECOMMENDATIONS

The results of this study should be interpreted in light of its limitations. First, in research with self-report instruments, participants will be able to provide socially desirable responses and can suffer from bias or halo effects. In order not to perceive cyberloafing as a negative behavior, the expression "non-work-related internet use" is included in the survey statements. In addition, the quantitative results of this research were supported and enriched by the results of interviews. The scope of the study was attempted to be expanded by using a mixed model rather than a quantitative or qualitative research alone. Second, even though Type I Error was eliminated through conducting Bonferroni Adjustment, the sample size might have an effect on significant results.

Researchers might consider validating the research model with data samples from various industries. This study has addressed employees involved in the technology production sector. Organizations in the private sector and public sector may have different characteristics. Therefore, different dynamics can be found in terms of cyberloafing. For this reason, it would be useful to conduct research with public institutions in order to examine the difference clearly. The organization in which the research was carried out is one of the largest in the country. Considering that small-scale organizations can differentiate from large-scale organizations in terms of their cultural characteristics, practices, and employees so research in small-scale organizations will also reveal the state of cyberloafing in such organizations.

While employees indicate many benefits of cyberloafing behavior, the majority of them emphasize that these behaviors should not become excessive. By including their employees in the decision-making process, organizational administrations can develop common policies for behaviors such as cyberloafing and reach a consensus. Given the participants' views on their use of social media, the use directives that institutions will create and explain the use of such applications by employees may be useful.

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