## Original Article

# Assessing the Workplace Cyberloafing Behavior among Pharmacists in Pakistan

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**ABSTRACT**

**Objective:** After the commencement of the Internet and the popularity of various electronic devices, cyberloafing has become prevalent in the workplace regardless of professional type, demographic characteristics, and country. Individuals use the Internet for work-irrelevant purposes during work hours, which is believed to have a controversial role in work productivity. However, rare studies have paid attention to the prevalence of cyberloafing behavior among Pakistan pharmacists. Considering pharmacists' essential role in the health sector, this study investigates the prevalence of cyberloafing activities among workplace pharmacists in Pakistan. **Methods:** This cross-sectional survey was conducted among 242 registered pharmacists in Pakistan between October 2021 and February 2022 with a structured self-administered online questionnaire. The final sample consisted of 200 valid responses after screening. Data were processed through exploratory factor analysis and confirmatory factor analyses. Pearson Chi-square analysis was also used to test the correlation between factors. **Findings:** Descriptive analysis shows that pharmacists spend more time on sharing-related activities and least on gambling/gaming-related activities in the workplace. All the items' Cronbach's alpha values range from 0.923 to 0.927. The analysis indicates that (60%) pharmacists have intermediate Internet skills. The results also suggest that age, Internet usage, and work area have a strong relationship with cyberloafing behaviors which also, in turn, are linked with their perceived Internet skills. This study has important practical implications for pharmacy management in Pakistan. **Conclusion:** Cyberloafing behavior is prevalent among Pakistan pharmacists. Our findings could inspire how managers and all other relevant stakeholders could improve the pharmacy system in Pakistan.

**KEYWORDS:** *Cyberloafing, internet, Pakistan, pharmacist, workplace*

## INTRODUCTION

With more people having access to the Internet, surfing the Internet has significantly affected daily life, such as chatting, watching and downloading videos, online shopping, gaming or gambling, reading news, posting, commenting, and sharing on social networks during working hours. Cyberloafing is defined as personal Internet use at the workplace.[1,2] The increase in the prevalence of cyberloafing occurred after the commencement of Internet and electronic device usage.[3]

Although there is a common perception that cyberloafing harms work efficiency, some researchers have suggested that it has a positive effect on productivity by improving creativity, refreshing the mind, and reducing stress[4-6] Nurhidayah and Wahyanti found that cyberloafing is

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considered a stress-relieving factor among millennial employees.[6] On the contrary, the other study, including mainly the X-generation individuals, could not find an association between stress and cyberloafing.[7] The qualitative study examined the relationship between productivity and cyberloafing behavior of hospital employees and claimed no significant relationship between the two variables.[8]

Job role uncertainty,[9] personality traits (i.e., self-control and addiction behavior),[10] cyberloafing psychological entitlement, job characteristics, and work stress[11] are the leading causes of cyberloafing. According to the studies conducted in Pakistan, abusive supervision[12] and job stress[13] were positive with cyberloafing.

Ever since the COVID-19 outbreak, the work environment has changed, and activities such as working, shopping, studying, and meeting online have become the "new normal"[14,15] It is inevitable for organizations to use the Internet and have employees cyberloafing during working hours. Therefore, employers must determine its prevalence and causes and take appropriate measures. Syed *et al.*, in their review, discussed the strategies to control cyberloafing in the workplace and stated that there is a paucity of studies that addressed employers' views on cyberloafing.[16] Zhong *et al.* and Saleh *et al.* suggested that employers take open and flexible measures on employees' cyberloafing activity with appropriate restrictions to prevent immoderate one.[15,17] At the same time, Rahayuningsih and Putra and Mashal mentioned the need for organizational Internet and smartphone policies and procedures to provide a productive workplace environment.[18,19]

The pharmaceutical sector is an essential part of the health sector, and WHO stated that the comprehensive evaluation of the pharmaceutical sector gives the possibility of determining the problems and further improvement.[9] Pharmacists play vital roles in the pharmaceutical sector, and the health-care system cannot function capably regarding medicine-related issues without pharmacists.[20] However, to our knowledge, no research has been conducted on the cyberloafing behavior of pharmacists working in Pakistan. Thus, the study's objective is to investigate the prevalence of cyberloafing activities among workplace pharmacists in Pakistan and explore the nature of their cyberloafing behaviors.

## METHODS

Using convenience sampling, the researchers collected the data through an online survey in Pakistan between October 20, 2021, and February 28, 2022.

The questionnaire was created using survey monkey, a professional platform for online surveys, and the questionnaire link was sent through WhatsApp to personal contact. The participants were asked to forward or post the links among their WhatsApp groups. An electronic informed consent was taken from the participants. The investigator assured the participants that the survey would be confidential and anonymous and that the results would only be used for research purposes. Participants were asked to provide demographic information and self-administer a 30-item Cyberloafing questionnaire that consisted of items related to sharing, shopping, online content, gaming, gambling, and real-time updating during the pandemic.

The researchers approached 242 participants who were registered Pharmacists with working experience from all over Pakistan. The participants were employees in various disciplines, including retail, hospital, industrial, clinical pharmacist, regulatory officer, drug inspector, medical sales representative, distribution company, research and development, academic, and teaching. The researchers included participants from various organizations and industries to make the results generalizable to different organizational settings as far as possible. After screening out invalid surveys (i.e., missing data, pharmacist not residing in Pakistan, participants who are not a pharmacist, or if they disagree with our general statement), the final sample comprised 200 surveys with a valid response rate of 97%. The researchers excluded the participants after the due day. The total number of pharmacists, according to Muhammad *et al.*, 2021 was 34,000.[21] The sample size for the study was calculated according to Glenn D. Israel's calculation, with precision levels of $\pm 7\%$ and a confidence level is 95%.[22]

The researcher measured a 30-item Cyberloafing scale validated in the past by Akbulut *et al.* 2016. The essential items were measured with five-point Likert scales ranging from 1 for "always" to 5 for "Never."

The nine-item scale consists of items such as "*I check my friends' posts,*" "*I check my friends' social networking,*" "*I share content on social networks,*" "*I like posts that are interesting,*" "*I comment on shared photos,*" "*I poststatus updates on social networks,*" "*I tag friends on photos,*" "*I chat with friends,*" "*I watch shared videos.*"

The seven-item scale consists of items like "*I shop online,*" "*I visit deal-of-the-day websites,*" "*I visit online shopping sites,*" "*I visit auction sites,*" "*I use online banking services,*" "*I visit online shops for used products,*" "*I check job advertisements.*"

The five-item scale consists of items, *"I comment on trending topics," "I posttweets," "I read tweets," "I favourite a tweet I like,"* and *"I retweet a tweet I like."*

The five-item scale consists of items for example, *"I download music during class", "I watch videos online", "I listen to music online", "I download videos", "I download applications I need."*

The four-item scale consists of items like, *"I visit betting/gambling sites," "I bet/gamble online," "I check online sports sites,"* and *"I play online games."*

Results were analyzed using the Statistical Package for the Social Sciences (IBM) (SPSS Version 27) New York, U.S. and IBM SPSS Amos. Data were processed through exploratory factor analysis (EFA) and confirmatory factor analyses. After relevant fit indices were reported, descriptive statistics and internal consistency coefficients (alpha) were calculated. We report Pearson Chi-square analysis to test the correlation between factors (sharing, shopping, accessing online content, gaming/gambling, real-time updating, Internet skills, working area, and Internet usage).

## RESULTS

The current study examining the prevalence of Cyberloafing behavior was evaluated through the frequency of each cyberloafing activity of pharmacists at the workplace. The top Cyberloafing activities of pharmacists during working hours are liking an interesting post (44.0%), chatting with friends (28.0%), watching shared videos (35%), and downloading applications (34.5%). The other activities that pharmacists usually involved in during working hours were checking their friends' posts (35.5%), watching shared videos (35.0%), checking the job advertisement (28.5%), and watching videos online (29.0%).

The sample had 70 males (35%) and 130 females (65%) whose age was between 18 and 24 years old (43.5%). Over half of the participants (58%) had an undergraduate education, and 28% had a master's degree. The participant employed full-time was 43.5% ($n$ = 87) years. Almost one-quarter of the participants (24%) had an approximate average household income of USD 220–330 (PKR 40,000–59,999). Ninety-seven percent of the participants were Muslim in the sample size. The sample was collected from different cities in Pakistan, with Karachi (65.5%), Bahawalpur (10.5%), and Lahore (5.5%), respectively. 17.5% and 15.5% of the pharmacist were employed as academic and hospital Pharmacists, respectively. The self-assessment analysis indicates that 60% of pharmacists assessed their Internet skills as intermediate. Moreover, 98.5% of pharmacists use the Internet every day.

The thirty items of the Cyberloafing scale were subjected to EFA in SPSS 27 with a sample size ($n$ = 200). The Kaiser-Meyer-Olkin coefficient (cyberloafing scale = 0.886) and Bartlettfi's Test of Sphericity ($\chi^2$ = 3259.805, $P$ = 0.000) indicated good-item correlations. The 30-item scale communalities lie between (0.362 and 0.844). The communalities between 0.25 and 0.4 have been suggested as acceptable cutoff values, with ideal communalities being 0.7 or above.[23] The results of EFA found six items with an eigenvalue >1.0, and their cumulative variance contribution exceeded 63.029%.

The five-factor model of the cyberloafing scale that consists of sharing, shopping, real-time updating, accessing online content, and gambling/gaming performance fitted the data poorly with P Chi-square statistics/degree of freedom CMIN/DF = 7.925; Root Mean Square Error of Approximatio RMSEA = 0.187; comparative fit index = 0.000; goodness-of-fit index = 0.248; Root mean square residual RMR = 0.461, normed fix index = 0.000). RMSEA in the range of 0.05–0.10 was considered an indication of proper fit, and values >0.10 indicated poor fit.[24] CMIN/DF <3 indicates an acceptable fit between the hypothetical model and sample data (Kline, 1998) and CMIN/DF <5 indicates a reasonable fit.[25]

Item statistics of the 30-item cyberloafing scale are given in Table 1. The mean item statistics range between 1.96 and 4.65 (standard deviation 1.08–0.86). A perfect correlation was found between the items. Cronbach's alpha based on standardized items was 0.928. Cronbach's alpha values of all the items range from 0.923 to 0.927. McDonald's ω value was observed as 0.924. The item scores of the cyberloafing scale were normally distributed (skewness ranged between −2.623 and 1.013; kurtosis ranged between −1.382 and 6.186). Acceptable values of skewness fall between −3 and +3, and kurtosis is appropriate from −10 to +10 when utilizing SEM (Structure equation Modeling).[26] Squared multiple correlations between items were found between 0.358 and 0.843. The corrected item-total correlation was all >0.400. Cronbach's alpha of item deleted ranges between 0.923 and 0.927. Corrected item-total correlation and squared multiple correlations were given in item-total statistics [Table 2].

The Chi-square statistic is commonly used for testing relationships between categorical variables. A signification correlation was observed between Internet usage and sharing ($P$ = 0.033); age and accessing online content ($P$ < 0.001); Internet usage and accessing online content ($P$ < 0.001); gambling/gaming and Internet skills ($P$ < 0.001); gambling/gaming and working

### Table 1: Item statistics (*n*=200)

|  | Mean±SD |
| --- | --- |
| I check my friend's posts | 2.2600±1.00371 |
| I check my friend's social networking profiles | 2.9000±1.13421 |
| I share content on social networks | 2.7300±1.16356 |
| I like posts that are interesting | 1.9600±1.08364 |
| I comment on shared photos | 3.1850±1.10766 |
| I post status updates on social networks | 2.9100±1.25690 |
| I tag friends on photos | 3.3200±1.19782 |
| I chat with friends | 2.3650±1.12611 |
| I watch shared videos | 2.4500±1.18936 |
| I shop online | 3.0350±1.24156 |
| I visit deal-of-the-day websites | 3.5500±1.24307 |
| I visit online shopping sites | 2.8800±1.29770 |
| I visit auction sites (e.g., e-bay, amazon, Daraz) | 3.2300±1.30214 |
| I use online banking services | 2.8950±1.50175 |
| I visit online shops for used products | 3.7450±1.34873 |
| I check job advertisements | 2.6300±1.25338 |
| I download music during work | 3.9700±1.23967 |
| I watch videos online | 2.4500±1.21444 |
| I listen to music online | 2.9450±1.36060 |
| I download videos | 3.2900±1.25049 |
| I download applications I need | 2.1950±1.16350 |
| I visit betting/gambling sites | 4.4800±0.99223 |
| I bet/gamble online | 4.6500±0.86675 |
| I check online sports sites | 3.8250±1.33163 |
| I play online games | 3.7450±1.33374 |
| I comment on trending topics | 3.6900±1.17508 |
| I post tweets | 4.4050±1.02284 |
| I read tweets | 3.9050±1.25453 |
| I favorite a tweet I like | 4.0700±1.27405 |
| I retweet a tweet I like | 4.2350±1.16902 |

SD=Standard deviation

area (*P* = 0.004); real-time updating and Internet skills (*P* = 0.008); and real-time updating and working area (*P* = 0.031). The null hypothesis of the Chi-square test is that no relationship exists between the categorical variables in the population; they are independent. The Pearson Chi-square results are shown in Table 3.

## DISCUSSION

The results demonstrated that nearly all pharmacists are using the Internet daily and engaging in various cyberloafing behaviors. Among the studied five dimensions of cyberloafing behaviors, Pakistan pharmacists spend more time on stress-relieving online activities, including sharing-related behaviors and online content access, than cognitively demanding activities, such as gambling/gaming and tweeting. This finding was consistent with a previous study conducted in Pakistan,[13] where job stress was the main contributor to cyberloafing behavior. Cyberloafing is a more complex behavior that helps employees to cope with job stress.[27] Pharmacists need to escape from constant stress from time to time

via cyberloafing. Moreover, a descriptive study targeting occupational stress among pharmacists in Pakistan concluded that nearly all pharmacists experienced moderate stress regardless of their practice sectors, age, and gender.[28] The major reasons for this can be the low salary structure, lesser work experience, lack of support system and training, increasing workload, uncomfortable work environment, etc. The occupational stress of pharmacists has become a system problem in Pakistan.[20]

Age is found to be an important factor in accessing online content behavior. Previous studies also substantiated this finding where cyberloafing was regarded as a successful stress-relieving means for young employees.[6] In contrast, for older generations, cyberloafing was not considered a stress-relieving factor.[7] The age gap determines the variance in cyberloafing behavior. The older groups were more professional and practical in their work. Thus, they were less inclined to waste time on other work-irrelevant online activities.[29] Moreover, the age difference contributed to variance in Internet use and habits.[30]

The present study also reported a strong correlation between Internet usage and sharing behavior and between Internet usage and accessing online content. Individual media habits can explain this phenomenon. When individuals develop certain media habits, these behaviors will emerge automatically without self-awareness in response to environmental cues.[31] In other words, if pharmacists have access to the Internet and can use it at their workplace, they will probably engage in activities that have become a habit, like sharing behavior and accessing online content without self-instruction and deliberation. For this reason, some employers restrict or limit Internet access to prevent cyberloafing behavior in the workplace which is believed to lower work efficiency and productivity.

The findings showed that gambling/gaming and real-time updating were the two predictors for the perceived Internet skills of Pakistan pharmacists. The more frequently individuals engage in these online activities, the more likely they evaluate their Internet skills. Previous literature also demonstrated a statistically significant relationship between Internet experience and perceived Internet skills.[32] The individuals gain confidence in their Internet skills and capabilities via practical experience in online activities, such as gambling/gaming and real-time updating. The advanced level of online activity is proportional to the amount of self-assurance in their Internet abilities.

Furthermore, the present study demonstrated a significant relationship between the working area and

| Table 2: Item-total statistics ($n$=200) | | | | |
|---|---|---|---|---|
| | Scale mean if item deleted | Corrected item-total correlation | Squared multiple correlation | Cronbach's alpha if item deleted |
| I check my friend's posts | 95.6400 | 0.450 | 0.439 | 0.926 |
| I check my friend's social networking profiles | 95.0000 | 0.504 | 0.496 | 0.925 |
| I share content on social networks | 95.1700 | 0.582 | 0.589 | 0.924 |
| I like posts that are interesting | 95.9400 | 0.444 | 0.457 | 0.926 |
| I comment on shared photos | 94.7150 | 0.474 | 0.609 | 0.926 |
| I post status updates on social networks | 94.9900 | 0.577 | 0.609 | 0.924 |
| I tag friends on photos | 94.5800 | 0.519 | 0.481 | 0.925 |
| I chat with friends | 95.5350 | 0.468 | 0.393 | 0.926 |
| I watch shared videos | 95.4500 | 0.544 | 0.453 | 0.925 |
| I shop online | 94.8650 | 0.474 | 0.641 | 0.926 |
| I visit deal-of-the-day websites | 94.3500 | 0.568 | 0.504 | 0.924 |
| I visit online shopping sites | 95.0200 | 0.535 | 0.730 | 0.925 |
| I visit auction sites (e.g., e-bay, amazon, Daraz) | 94.6700 | 0.644 | 0.667 | 0.923 |
| I use online banking services | 95.0050 | 0.427 | 0.358 | 0.927 |
| I visit online shops for used products | 94.1550 | 0.519 | 0.532 | 0.925 |
| I check job advertisements | 95.2700 | 0.432 | 0.408 | 0.926 |
| I download music during work | 93.9300 | 0.518 | 0.519 | 0.925 |
| I watch videos online | 95.4500 | 0.512 | 0.537 | 0.925 |
| I listen to music online | 94.9550 | 0.562 | 0.554 | 0.924 |
| I download videos | 94.6100 | 0.530 | 0.495 | 0.925 |
| I download applications I need | 95.7050 | 0.453 | 0.454 | 0.926 |
| I visit betting/gambling sites | 93.4200 | 0.445 | 0.611 | 0.926 |
| I bet/gamble online | 93.2500 | 0.382 | 0.580 | 0.927 |
| I check online sports sites | 94.0750 | 0.565 | 0.586 | 0.924 |
| I play online games | 94.1550 | 0.581 | 0.546 | 0.924 |
| I comment on trending topics | 94.2100 | 0.605 | 0.554 | 0.924 |
| I post tweets | 93.4950 | 0.596 | 0.717 | 0.924 |
| I read tweets | 93.9950 | 0.581 | 0.670 | 0.924 |
| I favorite a tweet I like | 93.8300 | 0.625 | 0.837 | 0.924 |
| I retweet a tweet I like | 93.6650 | 0.674 | 0.843 | 0.923 |

| Table 3: Pearson Chi-square analysis between sharing, shopping, accessing online content, gambling/gaming, real-time updating, and nominal variables ($n$=200) | | | |
|---|---|---|---|
| | Pearson Chi-square value | df | *P* |
| Internet usage and sharing | 112.777 | 87 | 0.033 |
| Age and accessing online content | 125.290 | 76 | <0.001 |
| Internet usage and accessing online content | 126.326 | 57 | <0.001 |
| Gambling/gaming and Internet skills | 77.237 | 42 | <0.001 |
| Gambling/gaming and your working area | 187.873 | 140 | 0.004 |
| Real-time updating and Internet skills | 81.993 | 54 | 0.008 |
| Real time updating and your working area | 217.017 | 180 | 0.031 |

gambling/gaming and between the working area and real-time updating. In other words, there are variances in the frequency of engaging in gambling/gaming and real-time updating behaviors in different working areas. This result was in line with the expectation of other work areas' stress, workload, and environment variables. Some working areas have stricter rules and more intensive workloads. Therefore, time- and cognitive-consuming cyberloafing behaviors, such as gambling/gaming and real-time updating, are impossible.

Theoretically, the present study comprehensively describes the cyberloafing behavior among pharmacists during working hours in Pakistan. It investigates five dimensions of cyberloafing behavior in detail. Moreover, the study expands the knowledge base in understanding the possible reasons behind the cyberloafing behavior of Pakistan pharmacists.

The results highlight the importance of professional training for pharmacists to prepare them for potential challenges before starting the actual work. All related

stakeholders should cooperate in developing a long-term plan to improve the current situation regarding the job stress of pharmacists. A sustainable and well-defined support system should be designed to address future mental challenges and problems for pharmacists. The stress management programs could also help to improve their adaptability and resilience, which in turn facilitate the productivity of pharmacists.

In addition, the results suggest the prevalence of cyberloafing behavior of pharmacists in Pakistan. For managers and employers, the results imply that they should treat this issue seriously. On the one hand, they should set up a specific time for relaxing or organize some leisure activities to relieve stress. Otherwise, the employees must engage in other online activities to smooth their nerves. On the other hand, managers should buffer the effects of cyberloafing behaviors on productive work. They should allow a certain level of cyberloafing but limit that to an acceptable degree for both sides.

A cross-sectional study design evaluates the exposure and outcome of the study at the same time and does not determine the true cause-and-effect relationship.[33] The sample size of the population is small because of the migration of pharmacists to foreign countries. A recent study identifies 94% of the prevalence of emigration of pharmacists in Pakistan.[34] Most of the sample was collected from urban settings compared to rural settings due to the easy availability of pharmacists in the cities.

The present study concluded that nearly all pharmacists in Pakistan use the Internet daily and engage in various cyberloafing behaviors at work. Moreover among the five dimensions of cyberloafing, they are more engaged with sharing-related behaviors and online content access than gambling/gaming and tweeting. Age and Internet usage were correlated with the dimension of access to online content. Internet usage was also related to the dimension of sharing. Moreover, gambling/gaming and real-time updating behaviors were strongly associated with perceived internet skills. Moreover, the working area of the pharmacists determined the gambling/gaming and real-time updating behaviors. Considering the prevalence of cyberloafing among Pakistan pharmacists, all stakeholders should develop a healthy and sustainable system to help pharmacists to cope with stressful work. And managers should allow a certain degree of cyberloafing behaviors to guarantee the mental health of their employees. Extra efforts such as regular team-building or relaxing activities can help solve job stress to improve work efficiency and productivity in the long run.

### Conflicts of interest

There are no conflicts of interest.

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