

CAPITAL UNIVERSITY OF SCIENCE AND
TECHNOLOGY, ISLAMABAD



**Impact of Smart Phone Usage on
Work Neglect with Mediating
Role of Cyber Loafing and
Moderating Role of Work
Engagement**

by

Attique-ur-Rehman

A thesis submitted in partial fulfillment for the
degree of Master of Science in Management Sciences

in the

Faculty of Management & Social Sciences

Department of Management Sciences

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I dedicate this work to my mother as it was not possible for me to complete this work without her prayers.



CAPITAL UNIVERSITY OF SCIENCE & TECHNOLOGY
ISLAMABAD

CERTIFICATE OF APPROVAL

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Abstract

Smart phones were among the couple of innovations which spread so quickly on the planet. Literature provides possible outcome and background of smart phone usage. The main purpose of this study was to check that how smart phone usage at work place leads to work neglect through cyber loafing in IT sector of Pakistan. The model projected that smart phone usage at work place lead employees to work neglect through impacting cyber loafing, this meant that cyber loafing at work place leads to work negligence. Second purpose of study was to check whether work engagement affects the direct relation of smart phone usage and work neglect or not. Data for the study was collected from IT sector of Pakistan. Adopted questionnaires were used for data collection and the sample size was 363. Result showed that cyber loafing mediates the relationship between smart phone usage and work neglect. Study produced standard and anticipated results for work engagement in IT sector of Pakistan. According to results work engagement moderates the relationship between smart phone usage and work neglect. This study also showed distinctive and appealing relationship of work engagement as a moderator between smart phone usage and work neglect which strengthen the study.

Key words: Smart Phone Usage, Cyber Loafing, Work Engagement, Work Neglect.

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Chapter 1

Introduction

This study tested the impact of smart phone usage on work neglect with moderator work engagement and mediator cyber loafing. The primary goal of the study is to distinguish whether smart phone utilization lead to work neglect and how cyber loafing have an effect on this association. This study was especially directed in IT sector of Pakistan. First section of thesis talks about the background of smart phone usage, work neglect, cyber loafing and work engagement and defined these variables and their relations. Then it discusses the associations of these variables, gap in literature, the problem statement, research questions, research objectives, significance of the study, and supporting theories.

1.1 Background of the Study

In the present life mobile phone use has turned into a vital need of our life and it has also produced business and jobs prospect in the country and also speed up financial development. In the present period cell phone use has turned into an essential apparatus of correspondence among the all inclusive community of different countries. People are not recently fulfilling their social needs with cell phones yet in addition using the innovative mobile technology as a way that has brought a constructive change at both natural and community level ([Yuan et al., 2012](#)).

Throughout the previous three decades the world's economy has seen progressive transformation and the advancement in telecommunication area has realized an outstanding state of social economic and natural change. Cell phones with the facility of internet turned out to be something beyond a method for correspondence among individuals. They have changed into instruments which give practical situations and computerized personalities through which individuals look for pleasure, and which likewise empower clients to do shopping and deal with their resources. This change has additionally modified the examples of cell phone utilization and left this innovation subject to conceivably risky and problematic use. Such dangerous use of cell phones meddles with different exercises in day by day life, modifies relational relations and may even influence individuals' wellbeing and enjoyment ([Augner and Hacker, 2012](#)).

Apple launched present smart phone generation around ten years ago with massive advertisement but actually smart phones concept is not new. Smart phone were also available in showcase since 1993.

The thing that differentiates present smart phone and early smart phone's is that early smart phones were utilized by big business those smart phones were exceptionally costly for the general customers ([Brad, 2010](#)).

Google offered its android operating system in the end of 2007 with the expectation to capture smart phone market share. The focus was to present advance features in a single device that are generally required by customers by keeping the cost at minimum level. Features like, email, social site incorporation, sound/video, internet access, chatting alongside general features of the phone were a piece of these whole phone ([Nurfit, 2012](#)).

The concept and purpose of advance smart phone was primarily reducing the gap between corporate, businesses and general customer. Smart phone transformation and the display quality, display innovation and over that additionally planning to stabilize the operating system of mobile phones, present all the more effective batteries user friendly interface and numerous more features. Operating systems like Apple iOS, Google Android, Blackberry OS, Microsoft Windows are focusing to present more advance features in operating systems and smart phones which

will give stimulating component to big business and consumer. The role of android has been remarkable throughout this time era and big challenge to its competitors specially by introducing open source OS ([Brad, 2010](#)).

A smart phone is a device integrated with mobile computing technology and telecommunication technology. Smart phones change individuals' day by day life. Individuals utilize advanced cells as a gateway to the internet. Smart phones have multiple functions. People can use smart phones as a GPS navigator, video and music player, document readers, camera, communicating devices for e-mail and chatting. In addition, with an introduction of near field communication (NFC) technology, smart phones become a mobile wallet. Also, with a presentation of close field correspondence (NFC) innovation, advanced cells turn into a portable wallet. As smart phones infiltration rate expands, the reliance of smart phone increases ([Shin, 2014](#)) and there are negative impacts for habitual use of smart phones ([Lee et al., 2014](#)).

Utilization of Internet at work environment is expanding and representatives utilize it for individual work and demonstrate that he is doing an official work. This idea prompts cyber loafing ([Jandaghi et al., 2015](#)). Due to cyber loafing tasks are postponed and may not be finished at the given time. This will equally influence the work execution ([Venkatraman, 2008](#)).

With the developments in the field of technology, smart phone accessibility is not an issue and the greater part of the general population working in the organizations has smart phone. Smart phone use in the working environment is very normal. Smart phone utilization at work place for sensible time or in a leisure time won't hurt the organization but if the usage is out of the limits then it will definitely hurt the work performance and ultimately the organization also ([Vitak et al., 2011](#)).

Smart phones also have the prospect to promote employees commitment and they can be used as a social relationship tool. For instance, smart phones can promote independence, relationships with co workers as well as superiors, and information sharing, which can lead to work pleasure and contribute to work effectiveness ([Pitichat, 2013](#)).

In addition, when individuals in working environments have better connections and better inward correspondence or learning sharing, they are happy with their work-life and have a tendency to be more productive (Merrell, 2012). Therefore, smart phone technology can maintain work flow in company network, which facilitate workers in the company to become productive and cost-effective (Carayannis and Clark, 2012).

Work engagement is characterized as a optimistic, satisfying working oriented mind set (Schaufeli and Bakker, 2004). It is a gratifying practice for all human resources that go along with stance of power (vigour), devotion, and fascination in his own work (Bakker et al., 2008). Being vigorous, committed, and consumed at work does not routinely involve that busy workers work extremely hard or tremendously long hours (Sonnentag et al., 2008).

1.2 Gap in Literature

There are various findings of many researchers unfolding various aspects of smart phone usage on work performance. In past researchers (Lee, 2015) have attempted to test the relationship of smart phone usage and work performance with mediating role of usage frequency and usage hours but mediating role of cyber loafing has never been tested prior to this. The above research was conducted for the colleges of US and Korea. Researchers (Stoddart, 2016) used mediation of cyber loafing and mindfulness on role overload and work burnout.

Researcher (Pitichat, 2013) has tested moderating role of work engagement with potential of smart phones and work efficiency. Researchers (Derks et al., 2015) have also tested the moderating role of work engagement with smart phone use and daily work-home interference. Almost none of the traces related to cyber loafing and work engagement have been found for the above mentioned relationships. By testing the associations among variables and testing those in a collective form will assist to classify the impact on work performance. This will add a new aspect to the accessible literature of smart phone usage on work performance.

Smart phone usage will be tested as independent variables. Cyber loafing will play the role of mediating variable and work engagement as moderating variable. Work neglect will be a dependent variable. The impact of smart phone usage on work performance with mediating role of cyber loafing and moderating role of work engagement will also be tested.

1.3 Statement of the Problem

There were 4.55 billion cell phone clients worldwide in 2014 and 1.75 billion were smart phone clients.. In 2017, it will cross 5 billion users worldwide and 50 percent strength will be using smart phone ([EMarketer, 2014](#)).As of 1st April,2017 there are more than 139 million mobile users in Pakistan and 39.8 million user are using internet on their mobile phone.

According to the survey, conducted for CareerBuilder by Harris Poll, found that almost 80 percent workers have smart phone with them and they keep checking their phones. Due to this productivity decreases by 1-2 hours minimum and called them productivity killers ([Mirabella, 2016](#)).

Smart phone addiction or usage and cyber loafing are now a days a accepted topic among researcher. The researcher and practitioners have contributed a lot to draw attention to the consequences of smart phone usage on work performance, but limited studies had conducted on the mediating role of cyber loafing and moderating role of work engagement.

The use of smart phone at place of work may decrease the work performance or the work may be neglected. Cyber loafing may increase if usage of smart phone increases and ultimately decrease in work performance.

However, a large portion of the research around there has been carried in western point of view where there is high smart phone usage in the organizations. In developing countries like Pakistan there is high smart phone usage and there is no defined studies have been conducted. In Pakistani context this study will assist to classify the impact on work performance. This will add a new aspect to the

accessible literature of smart phone usage, cyber loafing and work engagement on work performance.

1.4 Research Questions

On the basis of the stated problems, the present study is indented to find answers for some questions, brief summary of the questions are as follows:

Question 1: What is the relationship between smart phone usage and work neglect?

Question 2: Does cyber loafing mediates the relationship between smart phone usage and work neglect?

Question 3: Does work engagement moderates the relationship between smart phone usage and work neglect?

1.5 Research Objectives

The general point of the study is to build up and test expected model to discover the association between smart phone usage and work neglect. Additionally, the mediating role of cyber loafing and moderating role of work engagement will also be used to find out the impact on the model. The anticipated relationship between the independent, mediating, moderating and dependent variables is shown in the research model of the study.

The specific objectives of the study are stated below:

- To explore the relationship between smart phone usage and work neglect.
- To explore the mediating role of cyber loafing between smart phone usage and work neglect.
- To explore the moderating role of work engagement between smart phone usage and work neglect.

- To explore the relationship between smart phone usage and cyber loafing.

1.6 Significance of the Study

This research is relatively a narrative thinking in context of Pakistan and mainly in software/IT sector since it aims to build up and test an integrative model. This study holds a considerable worth for the companies. The study holds the motivation behind deciding the immediate relationship of smart phone usage and its impact on work performance of the workers working in companies and also aims to provide cyber loafing as mediating the relationship of smart phone usage and work neglect.

Furthermore this study is also significant for the managers; it will help them to understand that usage of smart phone at work place has direct relationship with work performance. This study will contribute towards the progress of organizations and managers.

1.7 Theoretical Support

Over the last one decade a lot of research is conducted on smart phone usage taking into account different smart phone usage constructs. The underpinning theory for smart phone usage is social cognitive theory of internet uses and gratifications (LaRose and Eastin, 2004). Social Cognitive Theory (SCT), which proposes a hypothetical information for the frequently examine (Papacharissi and Rubin, 2000) experimental association between media enjoyment and media utilization. SCT is commonplace to media researchers in its prior incarnation as Social Learning Theory ,as a hypothesis of media impacts. In any case, SCT is an expansive hypothesis of human conduct that might be connected to media participation too. SCT places proportional causation among people, their conduct, and their condition. Inside SCT, conduct is a noticeable demonstration and the execution of conduct is resolved, in huge part, by the normal results of conduct, desires framed

by our own coordinate involvement or intervened by vicarious fortification saw through others. In this way, media utilization is unmistakable media utilization conduct and it is controlled by the normal results that take after from utilization. Since expected delight results might be defined from vicarious perception of others' conduct they can clarify utilization both among planned future clients of the Internet and current clients. SCT likewise recommends new ideas that may expand our comprehension of employments and satisfactions and their effect on media conduct. SCT gives a structure to incorporating uses and satisfactions instruments with these contending effects on singular media participation.

The use and enjoyment approach has been connected to an extensive variety of new media and communication tools, such as the cell phone ([Aoki and Downes, 2003](#)), the Internet, and PC based VoIP phone . In the light of these hypothetical deliberations, this study seeks to understand the use of smart phones and its impact on work performance in the Pakistani context.

Next chapter of thesis discusses the theoretical and empirical findings in literature regarding the variables of the study which lead to development of hypothesis for present study.

Chapter 2

Literature review

This chapter presents the literature related to the smart phone usage, work neglect, cyber loafing and work engagement, and the literature related to the relationship of these variables. Study identified cyber loafing as a mediator between smart phone usage and work neglect. And study also discussed work engagement as a moderator between smart phone usage and work neglect. After thorough literature review present study generated the hypotheses based on that literature and developed theoretical framework of relationships of these variables.

2.1 Smart Phone Usage

Smart phone has been considered as a class representation few years ago, but these days, smart phone are now considered as class sign and individuals vigorously depend on smart phone usage to be in social setup. (Leung, 2008) argued, out of 45 percent teenagers, 12 to 17 years old own a cell phone and furthermore have different gadgets to interface interpersonal organizations in which phone is most prevalent. . At the point when mobile phone was presented in Asia its cost was high to the point that lone rich individuals could bear the cost of it. After the improvement in technology, mobile phones become very normal (Chan et al., 2006). Old generation mobile phones were heavy and with expensive prices but with technology innovation new features were presented like Short Messaging

Service, information sharing and availability which got a drop the costs of old cells and furthermore new models were moderate for white collar class additionally (Chan et al., 2006).

According to (Leung, 2008), term leisure boredom means when an individual has nothing to do he gets exhausted. Such people are observed to depend more on their cell phones. This argument is true for teenagers and young ones as well. When they start feeling leisure boredom they tend to make calls or short messages from their cell phones, or they waste their time by involving themselves with internet browsing or e-socializing. Its mean that whenever they feel tired or fatigue they use their cell phone for making calls or playing games. The demanding nature also pushes youth breach the instructions to use cell phone because their demanding nature pushes youth to take risks that affiliates with usage. The youthful era just declines living without cell phones. Young people have make themselves such a great amount of subject to cell phones that they can't consider themselves without cell phones and if they confront a circumstance in which they lose their cell phone t they have an inclination that they are missing something (Donya and AfariKumah, 2010).

It is a typical felt that when individuals get exhausted they discover some excitement however everything has a suitable and unseemly planning to do. Same rule additionally applies on utilization of phones Individuals additionally build up a tendency for utilizing mobile phones at wrong conditions likewise in light of the fact that they can't control their need or inclination to utilize it.. This idea was upheld by the general population who were mobile phone dependent and they utilize their smart phone more for excitement and fun than for feeling that all is well and good and keep in contact with family. The distinction of utilizing phone in the desperate hour and for entertainment is that when a man endures a mishap and he calls for help that is a need and when a man is exhausted and he communicates something specific of hello to somebody to begin a talk it is enjoyment (Leung, 2008).

The youthful people feel that mobile phones have acquired a constructive transformation in their lives since it has reached anybody anyplace effectively. Other

than giving confirmation about family security by remaining in contact with them each time mobile phones has brought another idea of wellbeing by making crisis call through mobile phone.

An overview about those individuals demonstrated that 71.8 percent individuals utilize phone for business and 28.2 percent individuals utilize it for individual exercises. What's more, this overview additionally demonstrated that the essential explanation behind purchasing a mobile phone was for business reason. Additionally it has helped individuals to keep in contact with business contacts ([Donya and AfariKumah, 2010](#)).

2.2 Work Neglect

Work neglect is a form of what is sometimes referred to as withdrawal behavior, a type of counter efficiency ([Spector and Fox, 2005](#)). ([Kidwell and Robie, 2003](#)) considered work neglect to be "a risky, yet unapproachable, reaction to disappointment with a work" that shows in worker practices, for example, giving less exertion, maintaining a strategic distance from the director, taking more incessant or longer breaks than allowed, and appearing late for work. Employees engaging in work neglect are not giving full push to their work, and they are less profitable than they generally could be. At best, only individual efficiency will be reduced. In some cases, however, work neglect could end up plainly infectious, bringing about altered standards of acknowledged work conduct as different employees receives comparable undesirable practices. An example of such conduct was as of late seen among employees in the Department of Health of a US district. An examination uncovered that laborers took long snacks frequently in abundance of two hours and ran individual responsibilities on work time.

In Rivethhead, ([Hamper, 1986](#)) related how he and his colleagues swapped their duties in assembling plant to visit a drinking establishment while other line workers performed his and his co-worker tasks also. Although most occurrences won't be so bold, work neglect presumably happens considerably more regularly than directors might want to accept. for instance, found that 62 percent of store worker

confessed to work neglect, which they alluded to as "time theft." In contemporary associations, work neglect can likewise appear as "cyber loafing," which (Lim, 2002) characterized as workers abusing their organization's internet for individual purposes during working hours. (Verton, 2000) revealed that 30-40 percent of workers work time is spent utilizing the internet for individual interests. Despite the fact that work neglect shows in various forms, at whatever point and in whatever form it happens, it is a deplete on profitability and an intrusion of supervisors' desire that employees will give a reasonable day's worth of effort.

2.3 Smart Phone Usage and Work Neglect

Cell phones were among the couple of innovations which spread so quickly on the planet. Individuals utilize phones for various purposes. Right off the bat mobile phones were viewed as an instrument to help in business yet now they are more useful in social existences of individuals and in addition in business field. While at office the administration expects that workers will act naturally mindful and won't utilize phones for individual purposes. Since during work hours if workers utilize mobile phone it will influence their focus which will impact efficiency and their security and furthermore it will be unsettling influence for coworkers. So administration generally request that workers make individual telephone use at noon or coffee break and advise their family and companions not to aggravate them during work hours unless it is any sort of crisis (Cohen, 2001).

At the point when the utilization of the Internet or smart phone winds up plainly addictive, this may bring about negative impacts on money related, physical, mental, and social aspect of life (Young, 1999).

Smart phone addiction is the extraordinary utilization of mobile phone in a way that is difficult to oversee and its impact expand to different zones of life destructively (Park and Lee, 2014).

Alongside giving access to data through the internet, smart phones likewise empower the distribution and generation of new stuff, and give communication chances,

public cooperation, playing games, use of application , and the media records creation. Despite the fact that they are advantageous gadgets which encourage innumerable public and human being exercises, the utilization of smart phones carries with it different issues in the household, scholarly, word related, and social circles (Choliz, 2012).

The satisfaction and vitality that at first emerge from the utilization of smart phone may change into a condition that is risky for both the individual and society in the whole deal. Mishandle of advanced mobile phones and consistent checking may at last push the customers into chronic utilize or even to cell phone addiction (Lee et al., 2014).

Many smart phone users see their smart not just as a methods for making telephone calls, additionally as a recreations comfort, a handheld PC, and even as a friend with whom they have a private relationship.

(Lee, 2013) found that among various elements for smart phone addiction, work neglect, escape reality, and absence of control are strong valuable features in relation with smart phone addiction. Discovered aggravation of versatile capacities and virtual life introduction are critical components for smart phone addiction, which are similar as work neglect and escape reality.

H1: There is a positive association between smart phone usage and work neglect.

2.4 Cyber Loafing

Cyber loafing (also called cyber slacking) is workers non-business related utilization of organization gave email and the Internet while working (Lim, 2002). Some of this cyber loafing can be considered rather harmless, particularly if constrained in length (e.g., sending and accepting an individual email or checking features at CNN.com). Different sorts of cyber loafing, be that as it may, are viewed as even more an issue either on the grounds that they are additional tedious and along these lines lessen profitability (e.g., web based shopping), they are improper conduct at work (e.g., internet betting), or in light of the fact that they are open associations to legitimate liabilities (e.g., downloading music).

2.5 Smart Phone and Cyber Loafing

The growth of telecommunication industry assumed a critical part in societal and financial development of the planet. After 1980 cell phones replaced permanent phones in rich countries and assumed critical part for the expansion of those countries and it is currently doing likewise in less developed nations. Cell phones are world prevalent due to its innovation as well as influenced social existence of the general population. Mobile telephones are being utilized by individuals of each age bunch by male and female by youth uniquely for social business and political reason in day by day life and because of the importance of cell phones it is presently viewed as fifth media. Mobile phones are for joy and simple contact as well as they can be essential instruments to improve the efficiency in less developed countries like Bangladesh and Pakistan. Very nearly 80 percent of telephone calls are made to get data about market prices, currency rates and reaching relatives abroad (Cohen, 2001).

A few people infer that if mobile phones are utilized at work place then it will occupy them from work which will influence their output limit. While a few people surmise that since cell phones enhance communication with family and associates thus it will positively affect efficiency (Cohen, 2001).

H2: There is a positive association between smart phone usage and cyber loafing.

2.6 Cyber Loafing and Work Neglect

(Lim and Chen, 2012) conceptualized cyber loafing as a form of office cyber activity that leads employees to other activity rather than from their work, prevents them from completing their tasks timely and sometimes results in financial losses due to less worker output.

Workplace deviance refers to intended acts undertaken by company members that violate important organizational norms, with the end goal that the prosperity of the association and their individuals are violently influenced. Better said, cyber loafing is often referred to as a serious risk to organizational culture whereby time

efficiency, organizational commitment and adequacy are weakened through cyber loafing ([Barlow et al., 2003](#)).

H3: There is a positive association between cyber loafing and work neglect.

2.7 Cyber Loafing as a Mediator between Smart Phone Usage and Work Neglect

([Lim, 2002](#)) defined cyber loafing as any determined show of staff utilizing their associations' Internet access amid available time to surf non business related sites for non-work purposes, and get to (counting accepting and sending) non-business related email'.

Individual technological devices such as smart phone and tablet PCs have turned out to be prevalent, the structure of internet access and usage has also changed and the potential for people to take part in cyber loafing practices has expanded ([Kim et al., 2015](#)).

Cyber loafing results in poorer job performance through lost work time .In such manner, time invested on cyber loafing is time that would have been spent on work. Here, any loss of work time is expected to convert into lost efficiency. If this point of view is correct, one should expect a negative relationship between cyber loafing and work performance ([Vitak et al., 2011](#)).

Cyber loafing only effects work performance in specific cases. According to such a viewpoint, people have a specific amount of work to complete and they fall back on cyber loafing when they have the sufficient time to do so. It does not imply that anybody is equally productive; it proposes that each worker has a specific standard of work they seek to and they put enough work into get that standard and take part in cyber loafing with some of the left over time. If this viewpoint is right, then there should be no relationship - or a small relationship - between cyber loafing and work performance. Moreover, it is also the case that cyber loafing is only injurious if done in surplus. Frequent long spans of cyber loafing should contrarily estimate work execution ([Askew, 2012](#)).

(Stoddart, 2016) mediated cyber loafing between role overload and work burnout. Cyber loafing may also precede role overload. . Additional time spent on individual matters amid the workday and cyber loafing is probably going to expand a man's workload since they are investing less time in their work obligations. Cyber loafing may affect workers capacity to focus on their work obligations which prompts increments in burnout because of the measure of assets consumed on individual exercises.

H4: Cyber loafing plays a mediating role between smart phone usage and work neglect.

2.8 Work Engagement

Work engagement is characterized as a positive, satisfying work-related state of mind (Schaufeli and Bakker, 2004). It is an enjoyable practice for many workers that go along with feelings of energy (vigour), devotion, and absorption in ones work (Bakker et al., 2008). Being vigorous, devoted, and absorbed at work does not naturally suggest that occupied workers work extremely hard or tremendously long hours (Sonnetag et al., 2008). (Sonnetag et al., 2008) contend that in spite of the fact that the experience of being completely connected with at work has constructive results, proceeded with submersion in one's employment may be impeding for a man's affective state.

2.9 Work Engagement as a Moderator between Smart Phone Usage and Work Neglect

The experience of work engagement amid the day is related with a high enactment level .It is conceivable that this high initiation level is exchanged to the private space when returning home from work. However, (Bakker, 2014) showed that occupied employees do well in diminishing this high enactment level amid after-work hours, resulting in psychological detachment from job-related thoughts and

activities during the evening. In another study, demonstrated that consistently unwinding and mental separation from work while being at home corresponds with day by day engagement at work.

There is one study that analyzed the relation between smart phone use, engagement at work, and disengaging from work. ([Dery and MacCormick, 2012](#)) showed that functionally engaged workers, dynamic connectors as they call it, are competent of turning the device off as a means to disengage from work, empowering them to improve both hierarchical and individual needs. Most smart phone users in their study felt that the technology had improved their ability to engage with the place of work, while take pleasure of increased flexibility and mobility .

H5: Work engagement plays a moderating role between smart phone usage and work neglect.

2.10 Research Model

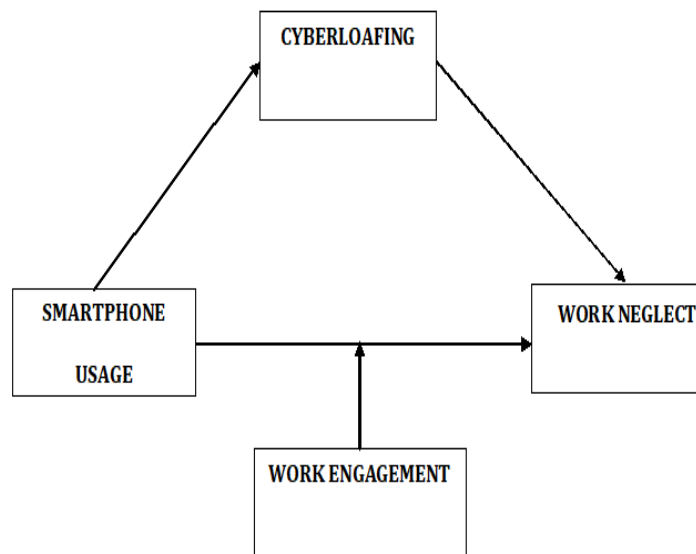


FIGURE 2.1: Research model of smart phone usage impact on work neglect:
Work engagement as a moderator

2.11 Research Hypotheses

H1: Smart phone usage has a positive impact on work neglect.

H2: Smart phone usage has a positive impact on cyber loafing.

H3: Cyber loafing has a positive impact on work neglect.

H4: Cyber loafing mediates the relationship between smart phone usage and work neglect.

H5: Work Engagement moderates the relationship between smart phone usage and work neglect.

Chapter 3

Methodology and data description

3.1 Research Methodology

This section discusses the research methodology and research strategy to be used for the dissertation in detail. The process for data being collected is also discussed in this chapter.

3.2 Research Design

The research was based on the deductive method and an adopted questioner was used to gather the data and the relationship of dependent, independent variable, mediator and moderator were examined. For better understanding, the data was examined through quantitative method.

The respondents were contacted at their workplaces to fill the questionnaires in the regular settings of their working environment. The findings of the research are not affected by the research interferences because the research interference did not exist. The unit of analysis was individual working in IT organizations and having smart phones from capital city Islamabad and Lahore.

3.3 Population and Sampling

3.3.1 Population

As the present study focused on the impact of smart phone usage on work neglect in Pakistan, the population of the study is the managers and subordinates of software/IT organizations having smart phones.

3.3.2 Sample and Procedures

As per website of PASHA (Pakistan Software house Association) over 12000 IT professionals are working in Pakistan. The respondents mainly consist of managerial level of different organizations. Data was collected through online and a self-administered paper-and-pencil survey. The snow ball and judgmental sampling technique is used due to time limitations. The respondents were contacted through researchers personal and professional contacts and through the chain referrals by referents.

The study was consented by the Capital University of Science and Technology, Islamabad. The cover letter is explicitly indicating that the study is being conducted for academic research purposes only and is aimed at providing clear understanding of smart phone usage in the work place and its impact on work. Participants were assured of the confidentiality of their responses and anonymity so that the respondents feel free to fill in the questionnaire without hesitation. It was also mentioned that the participants would be detained strictly private and the responses would be applied for the objectives of the current study as the summary statistics.

The completed questioners were collected by the researcher. The data was collected between March 2017 to May 2017. During the collection of the data, no major event happened in the organizations of respondents. More than 400 questioners were distributed because the total population of the organizations was more than 12000 and the sample size was 372 which were calculated by sample calculator, with 95percent confidence level and 5 was the confidence interval. The

363 questioners were retrieved out of 400 questioners; the retrieval percentage is 90 percent.

3.4 Scales

The data was collected through adopted questionnaires from different sources. The nature of the items included in the questionnaire is such that all of them i.e. Smart phone usage, cyber loafing, work neglect and work engagement have to be filled by people having smart phone. All the items in the questionnaire were responded to using a 7-points Likert-scale where 1 (strongly disagree) to 7 (strongly agree), unless otherwise stated. Questionnaires also consist of four demographic variables which include information regarding the respondent gender, age, qualification and experience.

3.4.1 Smart Phone Usage (Alpha = 0.93)

To measure Smart phone usage (27 items) the scale is adopted of ([Bianchi and Phillips, 2005](#)). The responses will be obtained through 7 point likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The items of the scale are "I can never invest enough energy in my cell phone, I have utilized my cell phone to improve myself feel when I was feeling down, I get myself involved on my cell phone when I ought to be doing different things, and it causes issue, All my companions possess a cell phone, I have endeavored to escape others how much time I spend on my cell phone, I lose rest because of the time I spend on my cell phone, I have gotten cell phone charges I couldn't stand to pay, When out of range for quite a while, I end up plainly engrossed with the prospect of missing a call."

3.4.2 Work Neglect (Alpha = 0.84)

To measure work neglect (4 items) the scale is adopted of ([Lee, 2015](#)). The responses will be obtained through 7 point likert scale ranging from 1 (strongly

disagree) to 7 (strongly agree). The items of the scale are My work suffers because of the amount of time I spend mobile, My job performance suffers from smart phone, I use smart phone longer than intended during I work, I lose sleep due to late night use of smart phone and reach my office late.

3.4.3 Work Engagement (Alpha = 0.93)

To measure work engagement (9 items) the scale adopted from (Breevaart et al., 2012) scales. The responses will be obtained through 7 point likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The items are "Today, I felt overflowing with vitality, Today, I felt solid and fiery at my occupation, When I got up toward the beginning of today, I craved going to work, Today, I was energetic about my employment, Today, my employment roused me, Today, I was glad for the work that I do Today, I felt cheerful when I was working seriously".

3.4.4 Cyber Loafing (Alpha = 0.94)

To measure To measure cyber loafing (22 items) the scale adopted from (Lim, 2002) and extended by (Henle and Blanchard, 2008) scales. The responses will be obtained through 7 point likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The items of the scale are During office hours, how often do you do the following for personal reasons "Checked non-business related email, Sent non-business related email, Received non-business related email, Visited general news destinations, Visited stock or venture related sites, Checked online personals, Viewed sports-related sites, Visited saving money or budgetary related sites"

3.4.5 Reliability Analysis

Cronbachs Alpha shows the degree of reliability and consistency of the variables. It is rule that the value of coefficient alpha must exceed the minimum standard that is 0.70 otherwise variable will not be considered good and reliable. Table (3.1) shows the reliability of reliability of all the variables.

TABLE 3.1: Reliability Analysis.

<i>Variable</i>	<i>No.ofitems</i>	<i>CronbachsAlpha</i>
<i>SmartphoneUsage</i>	27	0.93
<i>WorkNeglect</i>	4	0.84
<i>WorkEngagement</i>	9	0.93
<i>CyberLoafing</i>	22	0.94

3.5 Data Analysis Tools

Structural Equation Modeling (SEM) technique was used to analyze the data and to test hypotheses of this study. For this purpose IBM SPSS AMOS 20.0 and IBM SPSS 20.0 both were used to analyze the data. IBM SPSS was used to analyze Descriptive Statistics and Correlations of variables whereas IBM AMOS was used to analyze the measurement and structural models. Both models were tested through fit statistics. These statistics include multiple indices, for example, Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR).

3.6 Fit Statistics for Analysis

3.6.1 Goodness of Fit Index (GFI)

Goodness of Fit Index (GFI) tells absolute fit for both models ([Gefen et al., 2000](#)). According to ([Raykov and Marcoulides, 2000](#)), GFI is a degree of variance and covariance proportion. The calculated range of GFI lies between 0 and 1. For good model fit, value should be near to 1. Value above 0.80 indicates acceptable fit whereas below 0.80 indicates poor model fit that is the evidence of rejection.

3.6.2 Adjusted Goodness of Fit Index (AGFI)

Adjusted Goodness of Fit Index (AGFI) is another index related to GFI. According to (Byrne, 2001), AGFI adjusts the value of GFI according to degree of freedom. The calculated range of AGFI also lies between 0 and 1. Value should be close to 1 for good model fit. Below 0.80 indicates poor model fit whereas above 0.80 is acceptable fit.

3.6.3 Comparative Fit Index (CFI)

Comparative Fit Index (CFI) was first introduced by (Bentler, 1990) and this index assumes that all latent variables are uncorrelated (null/independence model) and compares the sample covariance matrix with this null model. The calculated range of CFI lies between 0 and 1. For good model fit, value should be near to 1. Value above 0.90 indicates acceptable fit whereas below 0.90 indicates poor model fit.

3.6.4 Root Mean Square Error of Approximation (RMSEA)

According to (Byrne, 1998), Root Mean Square Error of Approximation (RMSEA) estimates model goodness with population co-variance matrix. Different authors have suggested different threshold values of RMSEA. According to (Schumacker and Lomax, 2004), the value for RMSEA should be less than 0.05. (Hu and Bentler, 1999) suggested the calculated range of RMSEA between 0.06 to 0.08. (MacCallum et al., 1996) suggested the value should be equal to 0.10 or below 0.10.

3.6.5 Standardized Root Mean Square Residual (SRMR)

According to (Byrne, 1998), values for the Standardized Root Mean Square Residual (SRMR) range from 0 to 1. Value should be less than 0.05 to obtain well fitted model. Another argument is values as high as 0.08 are deemed acceptable (Hu and Bentler, 1999). An SRMR of 0 indicates perfect fit but it must be noted that

SRMR will be lower when there is a high number of parameters in the model and in models based on large sample sizes.

3.7 Analysis of Models

According to (Kline, 1998), measurement model and structural model are key components of full model. It is necessary to test measurement model first and if the results are significant then structural model should be tested.

3.7.1 Measurement Model

Measurement Model contains two types of analysis. First one is Common Factor Analysis and the second one is Confirmatory Factor Analysis. However for this study Confirmatory Factor Analysis was done on the basis of fit statistics criteria.

3.7.2 Structural Model

According to (Steenkamp and Baumgartner, 2000), Structural Model contains the testing of path and relationships that are hypothesized in the study. Direct and Indirect Effects of variables were included in the model and analyzed on the basis of fit statistic criteria and the p-value as well.

Chapter 4

Analysis and result

This chapter provides detailed analysis and results of collected data and hypotheses testing. First of all descriptive statistics of the model were presented by using IBM SPSS and then the results and analysis of Measurement Model and Structural Model were presented in detailed interpretations by using IBM SPSS AMOS.

4.1 Descriptive Statistics

4.1.1 Demographics

Following tables shows demographic descriptive of the study. Descriptive Statistics Analysis was done by using IBM SPSS and the results are:

First of all respondents were asked about their gender. Gender included two categories e.g. male and female. Here in Pakistan culture trend of female workers in IT organization is little bit lower than male. Total 61.4 percent of respondents were male and only 38.6 percent were female. Next demographic variable was age. Respondents were asked to categories their age. Respondents having age between 18-30 years were 56.7 percent, respondents age between 31-40 were 33.3 percent and respondents came under age of 41-50 were 9.9 percent. Next variable was about Education of the respondents. 1.7 percent was having intermediate degree, 23.7 percent were having bachelors degree, 48.2 percent were having masters degree and 26.4 percent were having post graduate degree. Next variable was

about experience. Respondents were asked about their experience. 19.0 percent respondents were having less than 1 year experience. 42.7 percent respondents were having 1-5 years, 17.1 percent having 6-10 years and 21.2 percent having 11-20 years experience. Respondents personal information was collected which is shown in table 4.1

TABLE 4.1: Demographics.

Variable	Frequency	Percent
Gender		
Male	223	61.4
Female	140	38.6
Total	363	100
Age		
18-30	206	56.7
31-40	121	33.3
41-50	36	9.9
Total	363	100
Education		
Intermediate	6	1.7
Bachelors	86	23.7
Masters	175	48.2
Post Graduate	96	26.4
Total	363	100
Experience		
Less than 1 year	69	19
1- 5 years	155	42.7
6-10 years	62	17.1
11-20 years	77	21.2
Total	363	100

4.1.2 Mean, Standard Deviation, Skewness, and Kurtosis

Descriptive statistic was done to reinforce the reactions. Elucidating insights give the synopsis of entire information and test. Table 4.2 shows the Descriptive Statistics of study. The results of the descriptive analysis showed that all variables were found significant in study area. 7 point linkert scale was used to measure the variables. The minimum and maximum mean values of smart phone usage were 1.00 and 6.04. Work neglect minimum mean value was 1.00 and maximum was 7.00. The mean value of work engagement included minimum 1.44 and maximum 6.22.

And the minimum mean value of cyber loafing was 1.50 and maximum was 5.82. The standard deviation of smart phone usage, work neglect, work engagement and cyber loafing were 1.00901, 1.37346, 1.04982 and 0.90160.

TABLE 4.2: Mean, Standard Deviation, Skewness, and Kurtosis

Variables	N	Mean	Std. Dev	Skewness	Kurtosis
Smart Phone Usage	27	3.92	1.00	0.02	-0.64
Work Neglect	4	3.13	1.37	0.29	-0.99
Work Engagement	9	4.44	1.04	-0.87	0.88
Cyber Loafing	22	3.67	0.90	-0.022	-0.48

4.2 Measurement Model Analysis and Results

4.2.1 Work Neglect

Work Neglect was coded as WN that included 4 items in scale. Statistic fit indices showed values that were on acceptable criteria, for example, CFI=0.992, GFI = 0.991, AGFI = 0.955, and RMSEA = 0.081. This variable showed favorable results and there was no need to delete any item in this variable.

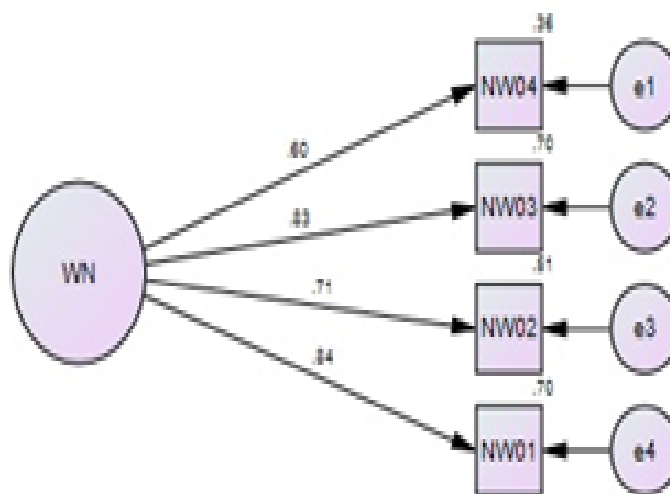


FIGURE 4.1: CFA for Work Neglect

4.2.2 Smart Phone Usage

The first variable of the study was smart phone usage coded as SPU that included 27 items in scale. Statistic fit indices showed values that were on acceptable criteria, for example, CFI=0.877, GFI = 0.666, AGFI = 0.809, and RMSEA = 0.087. This variable showed favorable results and there was no need to delete any item in this variable.

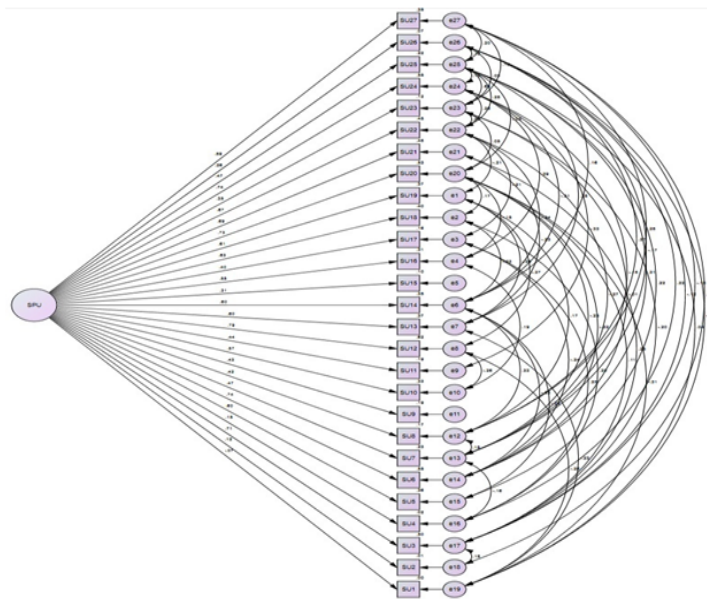


FIGURE 4.2: CFA for Smart Phone Usage

4.2.3 Work Engagement

Work Engagement was coded as WE that included 9 items in scale. Statistic fit indices showed values that were on acceptable criteria, for example, CFI=0.965, GFI = 0.962, AGFI = 0.919, and RMSEA = 0.079. This variable showed favorable results and there was no need to delete any item in this variable.

4.2.4 Cyber Loafing

Cyber loafing was coded as CL that included 22 items in scale. Statistic fit indices showed values that were on acceptable criteria, for example, CFI=0.875, GFI =

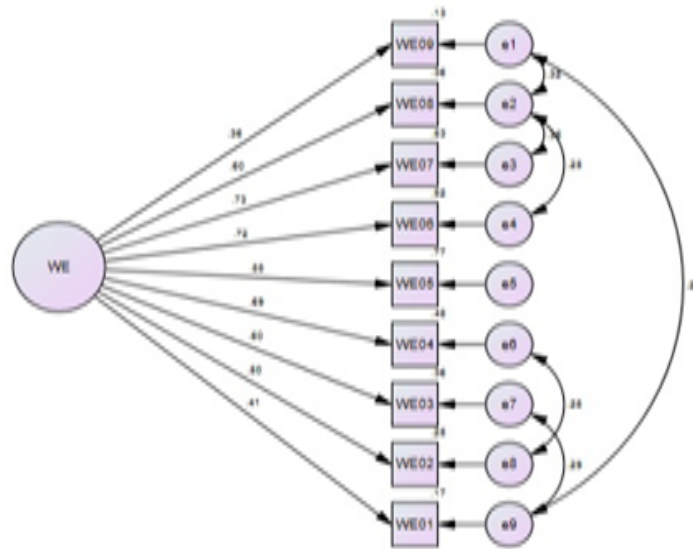


FIGURE 4.3: Work Engagement

0.889, AGFI = 0.821, and RMSEA = 0.086. This variable also showed favorable results and there was no need to delete any item in this variable.

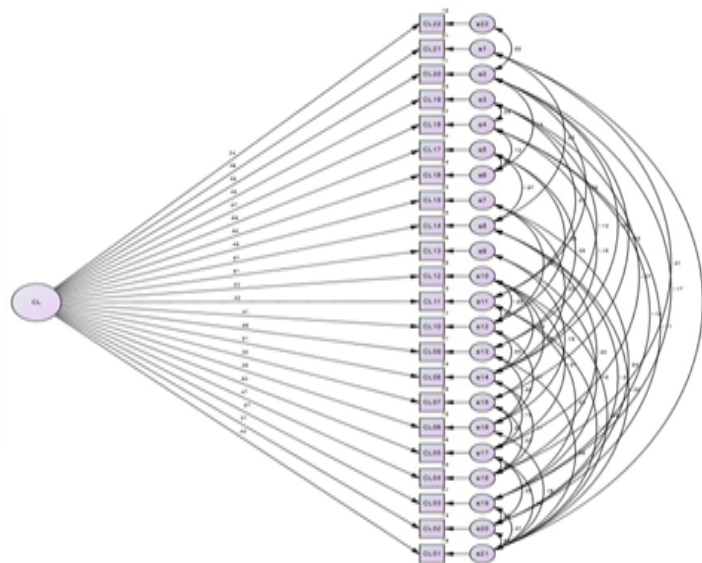


FIGURE 4.4: CFA for Cyber Loafing

4.2.5 Confirmatory Factor Analysis for all Latent Variable

The model was further tested with complete co-variance to check model fitness. This practice is also recommended in various literatures (Leach et al., 2008). The

results show acceptable range for GFI = 0.91, AGFI = 0.90, CFI = 0.92, RMSEA = 0.08, and SRMR = 0.06. Complete model CFA is presented in Fig 4.5.

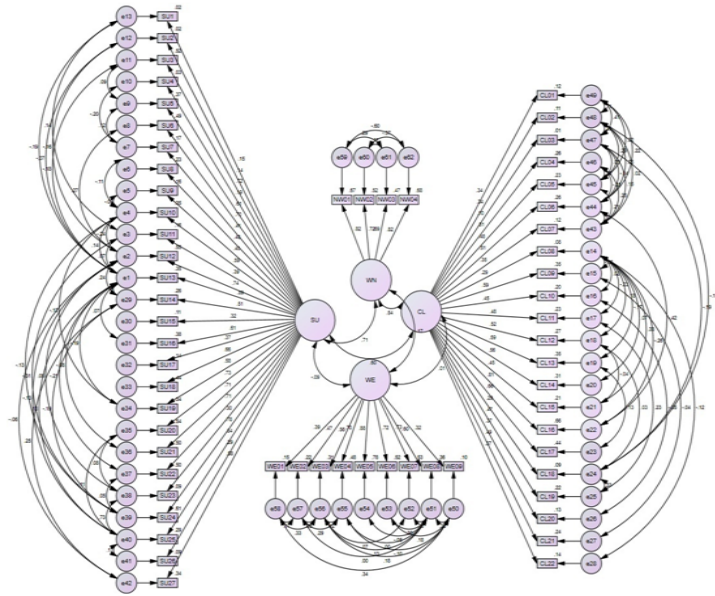


FIGURE 4.5: CFA for Complete Model

4.3 Correlations

Pearsons Correlation Analysis was done by using IBM SPSS tool. Table 4.3 shows the correlation of all variables of present study. correlation alludes to the extent of relationship of two factors and should go from 1 to - 1. The correlation analysis showed that Smart phone usage is positively correlated with the work neglect as $r = 0.596^{**}$, $p < 0.01$, significant positive correlation between smart phone usage and work engagement ($r = 0.511^*$, $p < 0.05$), a significant positive correlation between work neglect and work engagement ($r = 0.605^{**}$, $p < 0.01$). There is significant positive correlation between smart phone usage and cyber loafing ($r = 0.458^{**}$, $p < 0.01$), a significant positive correlation between work neglect and cyber loafing ($r = 0.454^{**}$, $p < 0.01$) and a significant positive correlation between cyber loafing and work engagement ($r = 0.558^{**}$, $p < 0.01$). **N= 363, P* is less then 0.05, P**is less then 0.01.**

TABLE 4.3: Correlation Analysis

Variables	1	2	3	4
Smart Phone Usage	1			
Work Neglect	0.596**	1		
Work Engagement	0.511*	0.605**	1	
Cyber Loafing	0.458**	0.454**	0.558**	1

4.4 Structural Model Analysis and Results

4.4.1 Single Regression

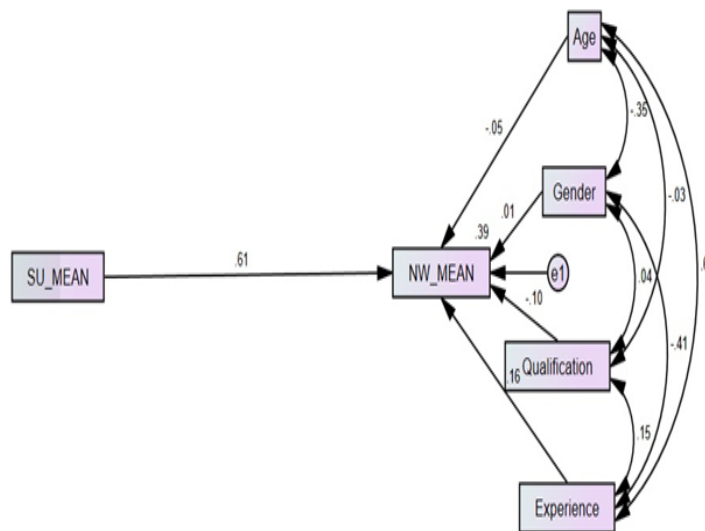


FIGURE 4.6: Single Regression

Overall statistics fit indices also showed acceptable values for example GFI = 0.99, AGFI = 0.96, CFI = 0.99, however values for RMSEA = 0.03, and SRMR = 0.03 showed below the range of acceptable criteria. Figure 7 shows the results of single regression between predictor variable smart phone usage outcome variable work neglect with controlled variables of demographics. The results showed highly significant ($p < 0.001$) relationship between these two variables with 0.61 regression weight.

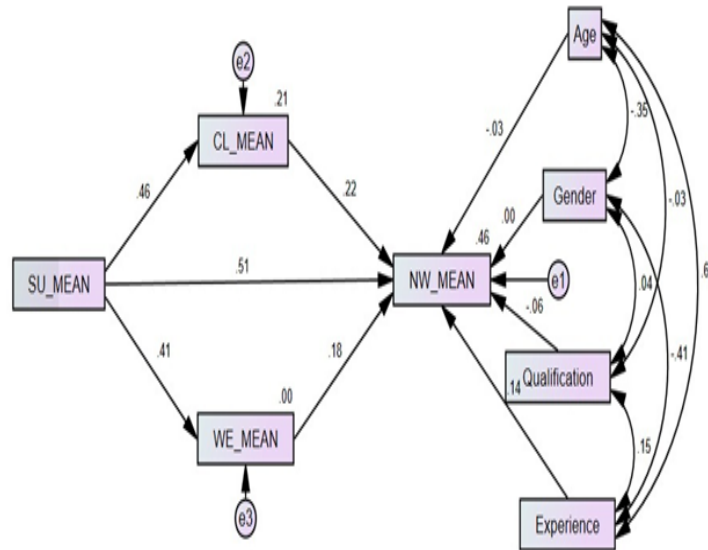


FIGURE 4.7: Multiple Regressions

4.4.2 Multiple Regressions

Statistics fit indices also showed acceptable values for example GFI = 0.95, AGFI = 0.87, CFI = 0.92, RMSEA = 0.11, and SRMR = 0.05. Figure 8 shows the results of multiple regressions between all variables of the study with controlled variables of demographics. The results showed positive and highly significant relationships between these variables. Smart phone usage work neglect showed highly significant relationship ($p < 0.001$) with 0.51 regression weight, smart phone and cyber loafing showed highly significant relationship ($p < 0.001$) with 0.46 regression weight, smart phone usage and work engagement showed highly significant relationship ($p < 0.001$) with 0.41 regression weight, Cyber loafing and work neglect showed highly significant relationship ($p < 0.001$) with 0.22 regression weight, and work engagement and work neglect showed significant relationship ($p < 0.05$) with 0.18 regression weight.

4.5 Mediation Analysis Evaluation

Mediation Analysis was done by employing bootstrap method to check the significance of each step as (Baron and Kenny, 1986) recommended. Mediation was

run in three steps to ensure the significance of the analysis and the result showed positive significance (p-values) in each step.

4.5.1 Mediation Analysis Evaluation

Overall statistics fit indices also showed acceptable values for example GFI = 0.99, AGFI = 0.96, CFI = 0.99, however values for RMSEA = 0.03, and SRMR = 0.03 showed below the range of acceptable criteria. Figure 9 shows the first step of mediation. First test of mediation suggests running model without mediator. The result showed positive highly significant ($p < 0.001$) value between the relationships. The regression weight between predictor and outcome variable is 0.61.

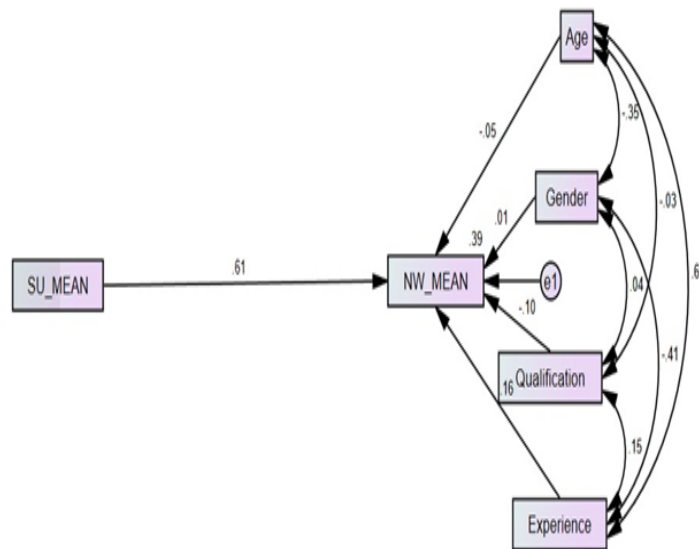


FIGURE 4.8: Mediation Step 1 (Without Mediator)

4.5.2 Mediation Step 2

Statistics fit indices also showed acceptable values for example GFI = 0.97, AGFI = 0.91, CFI = 0.96, RMSEA = 0.91, and SRMR = 0.05. Figure 10 shows the second step of mediation. Second step of mediation suggest to run the model with mediator. The result showed positive significant (0.03, $p < 0.05$) value between the relationships. The regression weight between predictor and outcome variable is 0.51.

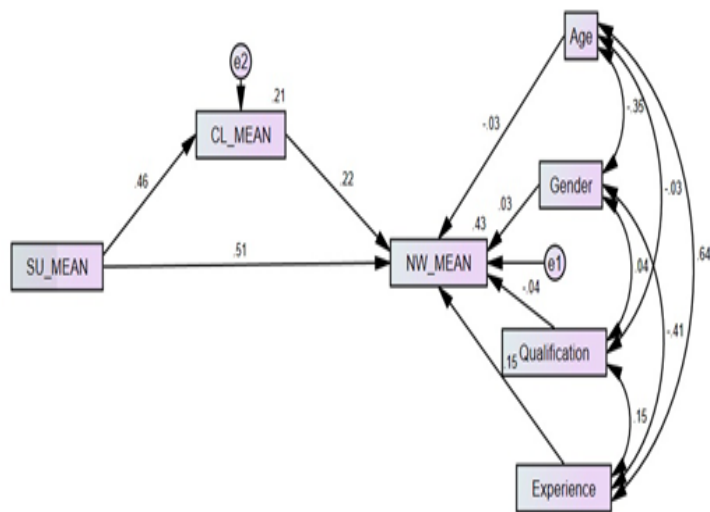


FIGURE 4.9: Mediation Step 2 (With Mediator)

4.5.3 Mediation Step 3

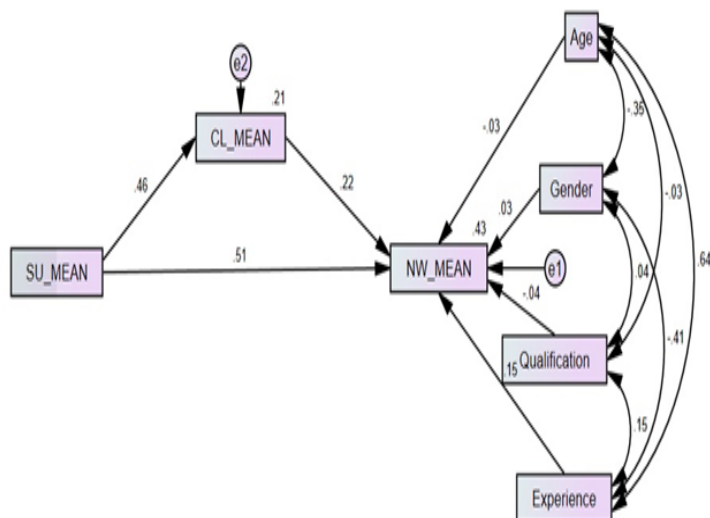


FIGURE 4.10: Mediation Step 3 (Indirect Effect by Bootstrap)

. Third step of mediation suggest to run the model by bootstrap method. The result showed positive significant (0.01, $p < 0.05$) value between the relationships. Statistic fit indices were in acceptable range as discussed above. the mediation paths analysis. Path a results suggest that smart phone usage is positively related to cyber loafing, ($\beta = 0.485$, $p < 0.001$). Path b results also suggest that cyber

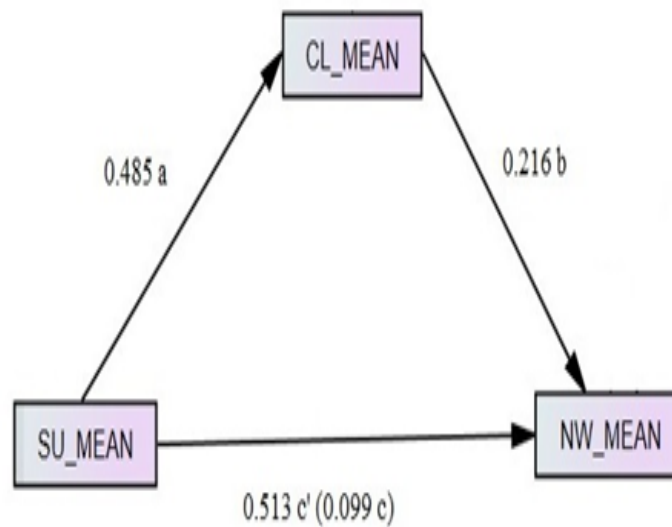


FIGURE 4.11: Mediation Paths

loading is positively related to work neglect, ($\beta = 0.216$, $p = 0.02$). Direct path c results suggest that smart phone usage is positively related to work neglect ($\beta = 0.413$, $p < 0.001$). Path c results of mediation suggested that there is a partial mediating role of cyber loading between smart phone usage and work neglect, ($\beta = 0.099$, $p = 0.01$). The change in c and c' confirmed the existence of mediator in the model.

4.5.4 Mediation Step 3

The statistic of indices showed favorable result for example GFI = 0.93, AGFI = 0.89, CFI = 0.91, RMSEA = 0.06, and SRMR = 0.06. The results of moderating effect of work engagement between smart phone usage and work neglect. The result showed significant results of moderation between the relationship ($p = 0.04$, p greater than 0.05).

4.5.5 Model Analysis

structural diagram of model with all variables of the study. Results are slightly different as compared to individual testing of model. Results showed significance

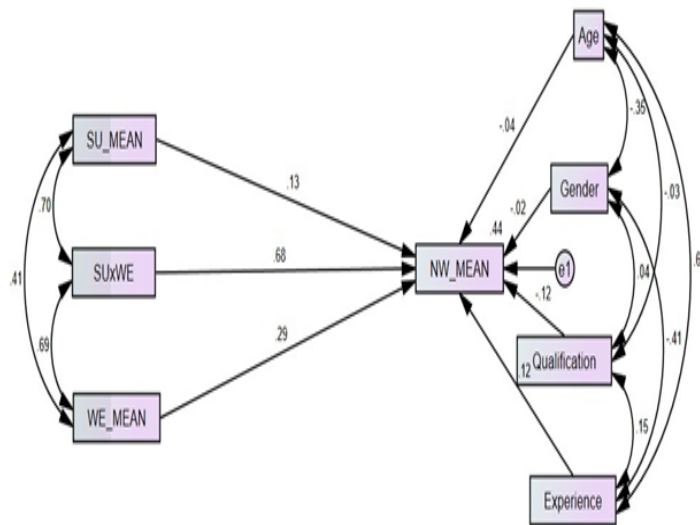


FIGURE 4.12: Moderation between Predictor and Outcome Variables

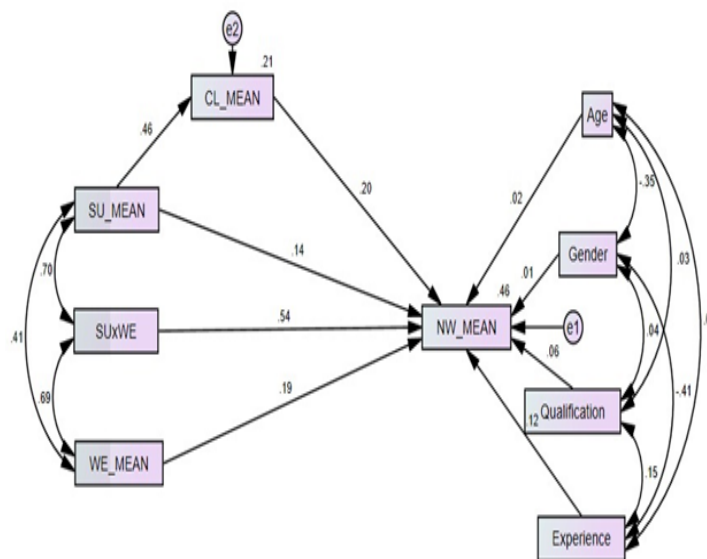


FIGURE 4.13: Model Analysis

between the relationships. Respondents personal information was collected which is shown in table 4.4

TABLE 4.4: Correlation Analysis

	Hypothesis	Status
H1	Smart phone usage has a positive impact on neglect of work.	Accepted
H2	Smart phone usage has a positive impact on cyber loafing.	Accepted
H3	Cyber loafing has a positive impact on neglect of work.	Accepted
H4	Cyber loafing mediates the relationship between smart phone usage and neglect of work.	Accepted
H5	Work Engagement moderates the relationship between smart phone usage and neglect of work.	Accepted

Chapter 5

Conclusion

This study tested the affect of smart phone usage on work neglect through mediator cyber loafing. And study has also tested work engagement as a moderator between smart phone usage and work neglect. This chapter discusses the results of study which were carried out in previous chapter.

5.1 Theoretical Implication

Previous studies ([Lee, 2015](#)) talked and discussed that the smart phone usage impact on work performance, but this study extended this work by describing mechanism through which this relationship occurs. ([Choliz, 2012](#)), discussed that the latest smart phones contains attractive features other than messaging and calls. The excessive use of smart phone at work during working hours affects the productivity of individuals and it delays the tasks also.

According to ([Park and Lee, 2014](#)), use of internet at workplace for non-office work affects the work performance and ultimately loss of productivity. ([Barlow et al., 2003](#)), discussed that utilization of internet at work place for personal purpose as an organizational risk. Study used cyber loafing as a mediator that led smart phone usage to work neglect. This study proved this relationship that cyber loafing mediates this relation of smart phone usage and work neglect.

The study also used work engagement as a moderator because before this work on

smart phone usage and cyber loafing has been done in western cultures, but Pakistan has different context so this study helped to check whether the relationship which was conducted in other western countries relates with Pakistan context or not. The study showed usual and different results for this relationship which is a contribution in literature.

5.1.1 Managerial Implications

This study will be helpful for managers, policy makers and researchers. This study will help organizations to deal with this smart phone usage at work place and the affect on work problems because now a days employees less performance is a major problem for organizations. With the help of this study organization will be able to know the reasons of this problem. Employees and employer relationships are given importance in these days so this study will help organizations to make policies or some regulations. So that employees use phone at work and it will not affect the employees performance and organization goals.

This study will help policy makers to make flexible and healthy environment where employees can use smart phone at work for specific time or for relaxation purpose. This study will help future researcher to further work on this model. Researcher could take support from present study to work on these concepts. Researcher could even further work on other dimensions by changing variables. Next section will discuss the limitations and future directions of the study.

5.1.2 Limitations

The study do have limitations, first of all, is due to the research was conducted in short span of time. The academic calendar and the schedule of the semester at MS level do not allow enough time and resources to conduct the study at a broad level.

The most important limitation of study was sample. The sample of the study is one sector (Information technology). As study used IT sector of Lahore and

Islamabad as a sample so it cannot be generalized to the other sector of Pakistan. Other sector may have different results from present study.

5.1.3 Future Research Recommendations

Limitations of the study can be used as future directions.

- Future research could be conducted by changing the sector of study because sector could change the results or the model could be tested in all sectors of Pakistan.
- Future Research could be conducted by taking big sample size for more generalize results.
- Future research could be conducted by adding different mediators like job satisfaction, usage frequency and usage hours.

5.1.4 Conclusion

This study examines all these independent, dependent, and moderating variables instantaneously in a distinct model, and therefore improves our understanding by demonstrating the joint effects, the goal of the study is to find out the impact of the smart phone usage on work neglect with mediating role of cyber loafing and with moderating role of work engagement. The result of the study supported all five hypotheses of study. The study was conducted in IT sector of Pakistan. According to results smart phone usage is positively related with work neglect mean as smart phone usage increases, work neglect will also increases. Cyber Loafing was proved as mediator between smart phone usage and work neglect, this relation is fully mediated by cyber loafing. Cyber loafing at work place leads towards work negligence. According to results work engagement moderates the relationship between smart phone usage and work neglect in IT sector of Pakistan means this dimension does affect the impact of smart phone usage on work neglect. Findings proved that whenever employee uses smart phone at work place, it leads to work neglect which ultimately affects the productivity and efficiency of employees.

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Appendix

Questionnaire

Dear Respondent,

I am student of MS Management Sciences at Capital University of Science and Technology Islamabad. I am conducting a research on **Impact of smart phone usage on work neglect with mediating role of cyber loafing and moderating role of work engagement**. Your valuable time is requested as your opinions will be contributing towards the study. I assure you that the response will be kept anonymous and will be used for academic purpose only.

Thanks a lot for your help and support

Sincerely,

Attique ur Rehman

Personal Information

Please provide following information.

Gender: (1) Male (2) Female

Age: (1) below 18 (2) 18-30 (3) 31-40 (4) 41-50 (5) Above 50

Qualification: (1) Matric (2) Inter (3) Bachelor (4) Master
(5) Post Graduate

Experience (1) Below 1 (2) 1-5 years (3) 6-10 years (4) 11-20 years
(5) 20+

Please tick the relevant choices: 1= Strongly Disagree, 2= Disagree, 3= Somewhat Disagree, 4= Neither Agree or Disagree, 5= Somewhat Agree, 6= Agree, 7= Strongly Agree

SMARTPHONE USAGE								
1	I can never spend enough time on my mobile phone	1	2	3	4	5	6	7
2	I have used my mobile phone to make myself feel better when I was feeling down.	1	2	3	4	5	6	7
3	I find myself occupied on my mobile phone when I should be doing other things, and it causes problems.	1	2	3	4	5	6	7
4	All my friends own a mobile phone.	1	2	3	4	5	6	7
5	I have tried to hide from others how much time I spend on my mobile phone.	1	2	3	4	5	6	7
6	I lose sleep due to the time I spend on my mobile phone.	1	2	3	4	5	6	7
7	I have received mobile phone bills I could not afford to pay.	1	2	3	4	5	6	7
8	When out of range for some time, I become preoccupied with the thought of missing a call.	1	2	3	4	5	6	7

9	Sometimes, when I am on the mobile phone and I am doing other things, I get carried away with the conversation and I don't pay attention to what I am doing.	1	2	3	4	5	6	7
10	The time I spend on the mobile phone has increased over the last 12 months.	1	2	3	4	5	6	7
11	I have used my mobile phone to talk to others when I was feeling isolated.	1	2	3	4	5	6	7
12	I have attempted to spend less time on my mobile phone but am unable to.	1	2	3	4	5	6	7
13	I find it difficult to switch off my mobile phone	1	2	3	4	5	6	7
14	I feel anxious if I have not checked for messages or switched on my mobile phone for some time.	1	2	3	4	5	6	7
15	I have frequent dreams about the mobile phone.	1	2	3	4	5	6	7
16	My friends and family complain about my use of the mobile phone.	1	2	3	4	5	6	7
17	If I don't have a mobile phone, my friends would find it hard to get in touch with me	1	2	3	4	5	6	7
18	My productivity has decreased as a direct result of the time I spend on the mobile phone.	1	2	3	4	5	6	7
19	I have aches and pains that are associated with my mobile phone use.	1	2	3	4	5	6	7
20	I find myself engaged on the mobile phone for longer periods of time than intended.	1	2	3	4	5	6	7
21	There are times when I would rather use the mobile phone than deal with other more pressing issues.	1	2	3	4	5	6	7

22	I am often late for appointments because I'm engaged on the mobile phone when I shouldn't be.	1	2	3	4	5	6	7
23	I become irritable if I have to switch off my mobile phone for meetings, dinner engagements, or at the movies.	1	2	3	4	5	6	7
24	I have been told that I spend too much time on my mobile phone.	1	2	3	4	5	6	7
25	More than once I have been in trouble because my mobile phone has gone off during a meeting, lecture, or in a theatre.	1	2	3	4	5	6	7
26	My friends don't like it when my mobile phone is switched off.	1	2	3	4	5	6	7
27	I feel lost without my mobile phone.	1	2	3	4	5	6	7
WORK NEGLECT								
1	My work suffers because of the amount of time I spend mobile.	1	2	3	4	5	6	7
2	My job performance suffers from smartphone.	1	2	3	4	5	6	7
3	I use smartphone longer than intended during I work.	1	2	3	4	5	6	7
4	I lose sleep due to late night use of smartphone and reach my office late.	1	2	3	4	5	6	7
WORK ENGAGEMENT								
1	Today, I felt bursting with energy	1	2	3	4	5	6	7
2	Today, I felt strong and vigorous at my job	1	2	3	4	5	6	7
3	When I got up this morning, I felt like going to work	1	2	3	4	5	6	7
4	Today, I was enthusiastic about my job	1	2	3	4	5	6	7
5	Today, my job inspired me	1	2	3	4	5	6	7

6	Today, I was proud of the work that I do	1	2	3	4	5	6	7
7	Today, I felt happy when I was working intensely	1	2	3	4	5	6	7
8	Today, I was immersed in my work	1	2	3	4	5	6	7
9	Today, I got carried away when I was working	1	2	3	4	5	6	7
CYBER LOAFING								
1	I check non-work-related email	1	2	3	4	5	6	7
2	I send non-work-related email	1	2	3	4	5	6	7
3	I receive non-work-related email	1	2	3	4	5	6	7
4	I visit general news sites	1	2	3	4	5	6	7
5	I visit stock or investment-related web sites	1	2	3	4	5	6	7
6	I check online personals	1	2	3	4	5	6	7
7	I view sports-related web sites	1	2	3	4	5	6	7
8	I visit banking or financial-related web sites	1	2	3	4	5	6	7
9	I visit online auction sites (e.g., Ebay)	1	2	3	4	5	6	7
10	I shop online for personal goods	1	2	3	4	5	6	7
11	I send/receive instant messaging	1	2	3	4	5	6	7
12	I participate in online games	1	2	3	4	5	6	7
13	I participate in chat rooms	1	2	3	4	5	6	7
14	I visit newsgroups or bulletin boards	1	2	3	4	5	6	7
15	I book vacations/travel	1	2	3	4	5	6	7
16	I visit virtual communities	1	2	3	4	5	6	7
17	I maintain a personal web page	1	2	3	4	5	6	7
18	I Download music	1	2	3	4	5	6	7
19	I visit job hunting or employment-related sites	1	2	3	4	5	6	7
20	I visit gambling web sites	1	2	3	4	5	6	7
21	I read blogs	1	2	3	4	5	6	7
22	I view adult-oriented (sexually explicit) web sites	1	2	3	4	5	6	7