

# CHAPTER 1

## INTRODUCTION

In this current age, cellphone use has transformed into a fundamental apparatus of correspondence among people throughout the planet. Cellphones, with an internet facility, is known as smartphones, ended up being something past a system for correspondence among people. This change has adjusted the instances of cellphone usage and has left this advancement to be talked about as a reason for possible hazardous effects due to its excessive and dangerous use which may intrude with users' various activities in everyday life, alter relations and may even impact person's prosperity, welfare, success and security (Augner & Hacker, 2012).

Cell phones offer various functions to their clients in a solitary little gadget, like a GPS navigator, video and music player, document reader, camera, data sharing and conveying gadgets for email and talk, and some more. Moreover, with a presentation of Near Field Communication (NFC) innovation, smartphones act as mobile wallets. As cell phones' penetration rate extended, the dependence on the cell phone expanded (Shin, 2014) even so, there are negative effects for ongoing utilization of smartphones (Lee et al., 2014).

Attaa (2010) reported that individuals were stunned with the advancement of the landline telephone in the nineteenth century yet in the following hundred years' development, affirmation, invasion and gathering of smartphone development has hypnotized the entire world. This new advancement is being used by all individuals regardless of sexual direction, monetary status, age, information, and other measurement qualities i.e. rural areas, urban areas, ethnicity or religious group.

The thing that separates early and present smartphones is that the previous ones were used by huge businesses and were especially expensive for the overall clients (Brad, 2010). Google offered

its android operating framework towards the end of 2007 with the assumption to catch the smartphone market share. The purpose was to introduce progressed features in a solitary gadget that are needed by the majority of the users, by keeping the expense at the base level. Features like email, social webpage incorporation, sound/video, web access, chatting, together with common features of the phone were contributions of these smartphones (Brad, 2010).

Recently, the internet has changed numerous parts of human life. It isn't just utilized for a singular source of data and amusement but also coordinated into different settings, for example, work settings, associations, organizations or institutions (Lin & Tsai, 2011). The quantity of internet utilization keeps on expanding with the number of smartphones and PCs that connect to the internet (Internet World Stats, 2021). Smartphones keep on playing a huge part in associating individuals with the internet while the quantity of desktop use has diminished (Ofcom, 2017).

Internet World Stats (2021) referenced that roughly 4.66 billion individuals throughout the world utilize the internet at the start of 2021, which is near about 60% of the world's total population. This number is as yet increasing as well, with our most recent information showing that 319 million new users came online in recent months. As per an estimate, the most elevated level of internet users is in Asia (55%), trailed by Africa (17.3%), Europe (10.7%), Latin America (8.4%), North America (4.7%), the Middle East (3.4%) and Australia (0.6%).

Pakistan has a populace of 223.0 million in January 2021. Pakistan's populace expanded by 4.3 million (+2.0%) between January 2020 and January 2021. 48.5% of Pakistan's populace is female, while 51.5% of its populace is male. 37.3% of Pakistan's populace lives in urban areas, while 62.7% lives in rural areas. There were 61.34 million web clients in Pakistan in January 2021. In the years 2020 and 2021 in Pakistan, the number of web clients has expanded by 11 million (+21%). Internet penetration in Pakistan remained at 27.5% in January 2021. There were 46.00 million online

media clients in Pakistan in January 2021. Somewhere in the years 2020 and 2021 the quantity of web-based media clients in Pakistan expanded by 9.0 million (+24%). The quantity of online media users in Pakistan was identical to 20.6% of the absolute populace in January 2021 (Simon, 2021).

The smartphone market has been continually developing for as long as a couple of years in Pakistan. Back in the day, there were just a small bunch of brands that were well known in the country like Samsung, Apple, and a few mobile devices from Q Mobile and Nokia's Lumia series. Generally, smartphone sales have shown a remarkable rise in the course of recent years, particularly between the time of 2016-2018. Where there was hardly a few million individuals utilizing smartphones a couple of years ago, however now it is more than 35 million, and the figure is required to keep on expanding quickly in future (Aasil, 2020).

In terms of smartphones, Pakistan ranked 21 on the list of countries with the most penetration. The numbers don't compare with different countries, but Pakistan's figure has been consistently increasing throughout the year. In 2019, there were 32.5 million smartphone users which are just 16% of the total population. It is not a large number, yet it is a slight increment over 2018 findings of several smartphone users where 14% of the total population was utilizing cell phones, which was 28 million individuals out of the total 200 million. Contrasted with earlier years, this is a significant rise considering it was just at 6.7% in 2017 (Aasil. 2020). There were 173.2 million mobile connections in Pakistan in January 2021. The number of smartphone connections in Pakistan expanded by 6.9 million (+4.2%) between January 2020 and January 2021. The number of smartphone connections in Pakistan in January 2021 was identical to 77.7% of the overall population (Simon, 2021).

Attaa (2010) stated that diverse buyer's extraordinary packages, the wireless associations in Pakistan are concentrating on youngsters by offering uncommon markdown calling rates, for

example, youth packages particularly the most affordable late-night offers, just charging few pennies for every hour. The publicizing procedures of mobile phone companies on standard wide interchanges reflect the popularity of smartphones among the youngsters in Pakistan (Attaa, 2010).

### **Smartphones and their addiction**

Smartphones have become progressively famous and more advanced in the most recent decade. The Sale of these communication devices have increased all around the world and it has become an important part of a person's everyday life (Manolis et al., 2014).

Quite a while since its introduction, the smartphone is as of now ubiquitous in ordinary everyday presence, for maximum individuals throughout the world. Given the different extent of limits oversaw by this pocket-sized gadget – from the transmission to route and amusement – the omnipresence of the smartphone gives off an impression of being unavoidable. However, while all day, every day admittance to a competent computer may make certain pieces of our lives less demanding, extending concerns exist about the adverse consequences of smartphone (over) use. Such issues are diverse and join the more extensive issue of our "automated impression", that is the record of customers' association on the internet through cookies. On an individual level, more insecurity in customers everyday life may be due to the excessive tendency of smartphone use. Smartphone utilization has the likelihood to frame into addictive behaviour, such as gambling, which can intrude with our standard everyday life (Gulab, 2017).

Smartphones have been created to have progressed figuring abilities (Choliz, 2016). A smartphone is not, at this point a gadget that can be utilized solely for calling and sending messages, however, can likewise be utilized to get to the Internet, take pictures, utilized as an alarm timer and as a gaming console, as alongside numerous other various types of media functions (Choliz, 2016).

In this time of information and data advancement, the importance and smartphones' standing

and position can't be denied. It has ended up being one of the significant resources for people and maybe depicted as a need among individuals in the present time and considered their lives lacking, dull, terrible and exhausting without smartphones. With the amazing advancement in the field of information development and astonishing upheaval in satellite correspondence systems, it has ended up being possible favourably to contact various individuals inside no conditions throughout the world (Attaa, 2010). Gulab (2017) revealed that most of us in recent times are utilizing smartphones which are thoroughly impacting us especially young people. People who use smartphones in abundance may experience individual, social and workplace issues.

Smartphones are useful in defeating the difficulties of regular day to day existence, from getting sorted out ordinary tasks to looking after correspondence, from amusement and shopping to versatile learning. For smartphone users, the first thing they look at toward the beginning of the day and the exact opposite thing they take a look at before sleeping is their smartphone and when an individual becomes smartphone-addicted and dependent, he/she loses the self-control that prompts to poor sleep quality (Chang et al., 2014).

Other than the positive aspects that smartphones add to human beings' life, there is likewise adverse consequences of it as well. Excessive, uncertain and problematic smartphone use can be 'risky' (utilizing a smartphone while driving), as 'unprofessional' and 'improper' (utilizing it at working environment) and as 'overuse' that is cyberslacking behaviour (Cevik et al., 2016; Hussain et al., 2019). The issues emerging from smartphone use are because of the interests and activities in which the client is locked in, the inspirations drawing in with these interests and activities, and the satisfaction got from them proceed the further excessive use (Fernandez et al., 2017; Hwang et al., 2016).

One previous research revealed that the attention to issues with rehashed utilization of

smartphones was undervalued, and some of the people said that they knew about it. A couple of respondents announced rehashed utilization of a smartphone as irritating, irresistible, "a snare," and diverting. They knew that rehashed use could prompt addiction; nonetheless, they didn't know about the seriousness of the rehashed and extreme utilization of a smartphone. In case one knows about the dangers presented by excessive smartphone usage habits, one would accomplish something against it. The consciousness of the seriousness of smartphone addiction can, accordingly, assume a part in prohibiting it (Oulasvirta et al., 2012).

Exploration looking at the natural factors that preface cyberslacking has yielded an amazing profile of the immoderate internet and smartphone user. It was discovered that people of different gender such as males and females are similarly liable to utilize the internet and smartphone and that misusers are bound to be profoundly contented employees. Likewise, it was discovered that executives are more into cyberslacking when contrasted with other employees (Hussain et al., 2019).

Addiction is contemplated by WHO as reliance, as the constant utilization of something for alleviation or incitement, which frequently causes desires and urges when it is unavailable. The excessive utilization of smartphones to a level where it meddles with the everyday lives of users is accordingly viewed as smartphone addiction (World Health Organization, 2021).

Advancement in technology and innovations are giving such helpful and great impact in everyday life of individuals. Notwithstanding, it additionally has bad effects on individuals and society like addiction towards technology. Smartphone addiction is one of the extreme innovation addictions which has become a big issue nowadays (Hyun et al., 2014). It is regarded as a sort of addiction that hurts the social relations of users by utilizing a smartphone in an inordinate and uncontrolled manner (Fidan, 2016; Ozen & Topçu, 2017). Smartphone addiction drives individuals to check their smartphones as often as possible and habitually, regardless of what circumstances for

instance gatherings, meetings. or in any event, even while walking, eating and working (Davis, 2012).

A study exhibited smartphone addiction as a condition secured to smartphones and their specifications (Davis, 2012). Smartphone addiction is firmly identified with internet addiction (Kwon et al., 2013). It expands the danger of addiction because of the way that they are progressed as far as preparing power and the capacity of individuals to get to the internet anywhere and anytime (Fidan, 2016; Kwon et al., 2013). Lin (2014) viewed that smartphone addiction could be seen as a sort of technology addiction.

Another research expressed that nowadays, addiction isn't just about drug or substance misuse, yet in addition infer to internet surfing, gaming or even smartphones. Normal people even clinicians use the term 'addiction' when a man is focused on a particular activity that harms his/her consistent practices and exhibits an example like substance addiction (Carbonell & Panova, 2017; Lee, 2006).

Chen and Jiang (2020) exhibited that it has been accounted that online activities, for instance, gaming, talking through text or call and explicit amusement that is pornography have been demonstrating similar degrees of addiction as those of medication and substance misuse. Moreover, as the web end up being more open through smartphone, the reliance configuration related to a smartphone has been demonstrated all more regularly and the concerns relating to the wonder have extended. This new kind of addiction has been brought about by fast creating media integrating the internet and smartphones in IT companies. It has gained the contemplation of countries all over the world.

People in this advanced century, who are dependent and addicted to their smartphones on account of different functions, applications and attributes in the smartphone, for example, studying

online books, surfing on Facebook, Twitter, Instagram and playing internet games. They are busy more with their smartphones and overlook the other person who they are with face to face (Davis, 2012). Çevik et al.(2016) revealed that it gives off an impression that young people who tend to have a smartphone addiction are furthermore inclined to have social, family and education-related issues. For sure, it has been communicated that such individuals' use of smartphones is higher and appeared differently with other people, and their inclination to use it continuously on the rise. Young people of the modern age, also known as the 'wired age', constantly figure out their activities through their smartphones in class, workplace or elsewhere, keep an eye on the informal contacts and utilize their smartphones to remain in contact with one another.

Many media-related activities were recognized as comparable to addictive practices or behaviours. For instance, entertainment-based activities, like playing games watching films, were at the first spot on this list. Excessiveness in socialization on Facebook and microblogs likewise raised the issue of extreme Social Networking Sites (SNSs) use. By incorporating different functions and specifications, smartphones have become captivating for people. From one viewpoint, smartphones work as data and information providing sources and assistance in different activities, for example, checking messages, ordering and arranging time schedules, and note-taking. Then again, smartphones likewise offer various games and person to person and social networking sites (SNSs). The excessive use of the smartphone and overindulgence in such activities can prompt negative results in individuals' everyday lives. With smartphones, individuals are bound to defer their work activities and promptly satisfy their needs for delight and joy. For employees, the habit of smartphone use can be a significant factor in psychological events. Being strongly involved in smartphone usage, straightforwardly cause a progression of addictive side effects (Gulyagci & Koc, 2013).



There are a few signs that are likely to appear in individuals who have a smartphone addiction. Prior researches on smartphone addiction demonstrated three unique attributes of smartphone addiction. The first are individuals who are dependent on a smartphone will ensure their smartphone is consistently on. The second attribute is likely to utilize smartphones even they have a telephone in their house, while the last attribute is confronted with monetary and social issues because of their overuse of smartphones (Chuon et al., 2017).

The past study revealed that withdrawal was the most usually distinguished smartphone addiction side effect in current. This outcome is predictable with that of past researches which have shown that encountering negative emotions when smartphones are not in reach or with a person is a vital pointer of smartphone addiction. The higher the degree of adverse emotions working individuals have without their smartphones, the more noteworthy their dependence on their smartphones. Additionally, this examination recognized three circumstances wherein workers/employees experience withdrawal manifestations identified with smartphone use these are, when a person has left the smartphone at home when the battery of the smartphone is running low, and deficiency of smartphone signal. These three circumstances can be utilized to work on the estimation of the withdrawal side effects of smartphone addiction because most past studies didn't explicitly consider them. Besides, the recognized preventive measures (e.g., charging the smartphones daily each night and continually keeping a compact power bank) for lessening withdrawal can be joined into the instrument for estimating the withdrawal side effects of smartphone addiction. Given that the negative sentiments coming about because of not having a smartphone with a person or being not able to utilize smartphones might cause behavioural and mental issues. This all happened because of addiction to the gadget and low self-control as when a person is experiencing low self-control he/she will face the consequences of withdrawal (Li &

Trisha, 2019).

When it's about the usage of smartphones at the workplace then that excessive usage of smartphones will lead to cyberslacking. Because of the presence of online media, cyberslacking is not only restricted to calls and messages. It has spread to different skylines and the addiction to smartphones is at the top. When employees spend additional time on a smartphone by using the internet for personal matters during working hours will probably increase the employees' workload due to giving less time to their work commitments. The research demonstrated that smartphone utilization at work by the employee prompts the neglect of work, it may affect employees' performance and efficiency at work as an employee is so much addicted to his/her smartphone that he/she cannot leave it for a single moment even during work, that makes a person more confident for doing cyberslacking (Hussain et al., 2019).

Most jobs these days include the utilization of IT in some limit and numerous advanced errands expect employees to invest a lot of energy on the web. Tragically, this can contrarily affect usefulness and may cause happening at work. The impulse to utilize the internet excessively for individual use during work time is progressively overpowering. This is turning out to be especially given that numerous employee utilize their own gadgets and company's as well to take care of their responsibilities and to perform different tasks. As per a new review by Salary.com, a faltering 62% of employees waste between 30 minutes - 1 hour of working hours each and every day. A lot of this is by means of the utilization of PCs, laptops and smartphones. The term cyberslacking is utilized to allude to when working hours are wasted because of the utilization of technology for social/individual reasons. Justifiably, cyberslacking levels or the excessive usage of technology can be undeniably challenging for managers and higher management to screen and control. Higher management and managers find it hard to create some kind of harmony between permitting some

personal tech use and letting cyberslacking become a parasite on organization funds (Fitzgerald, 2021).

Fitzgerald (2021) demonstrated some guidelines for a boss or manager to combat technology usage for personal reasons during working hours. As a boss or manager, one should diagram clear guidelines for the employees regarding the utilization of technology (computer, laptops and smartphones etc) for individual means. All things considered, you can't anticipate that your employees should know precisely how much individual technology utilization is over the line. Until you put down clear stopping points, your employees won't know when to stop.

The principles you force concerning individual utilization of innovation and technology gadgets are dependent upon you and obviously, will vary contingent upon the sort of business, job or work. For instance, the utilization of laptops, computers, smartphones, ipods and mp3 gadgets might be alright for some office occupations, yet clearly will not be for security staff, receptionists, those functioning weighty/hazardous hardware and machines and so on, you might need to restrict individual mobile or internet use to noon and breaks. The significant thing is to devise a use strategy that employees can undoubtedly follow and that will help their work yield. There should be some mechanism derived through which employee can also come to know about their status of using technology gadgets and internet for personal reasons so that they can overcome that excessive usage and can undoubtedly give their best on assigned tasks (Fitzgerald, 2021).

Put your employees down and update them regarding being cautious with individual technology use. Show your employees why the standards are being set up and the advantages to be acquired from following them (Fitzgerald, 2021).

## **Cyberslacking**

The execution of another essential work process and the coordination of another electronic climate in the working environment presents new difficulties for representatives in the 21st century. The incorporation of internet technologies, smartphone innovation, computer advances, information systems (IS), the excessive and overuse of those technologies, is continually on the rise. Excessive use or misuse of the internet for individuals' intentions was characterized as cyberslacking, cyberloafing, and cyberbludging (Hernandez et al., 2016).

Organizations are logically utilizing the internet to address the issues of the business and to adapt to worldwide difficulties in work. The internet has fortified organizations and companies and has changed the working environment into an overall organization. Hence, admittance to the internet for employees in the working environment has gotten a routine affair. Notwithstanding, the utilization of the internet at work gives employees another approach to take part in work evasion and any case slack off in the work environment, known as cyberslacking. Besides, for modern and present organizations, cyberslacking is an issue of developing concern (Huma et al., 2017).

Cyberslacking is indicated as the individual utilization of the internet for non-work purposes among employees, which is viewed as counterwork behaviour (Luqman & Masood 2020). Cyberslacking as close to personal basis utilization of the internet at the workplace (Bock, 2010; Pee, 2008; Phillips & Reddie, 2007) is turning into a developing worry as it breaks down productivity, lower down the performance and prompts adverse results (Duffy & Pruchniewska, 2017; Flanigan, 2018; Ngai, 2015; O'Neill, 2014; Setiawan, 2019). Different states of cyberslacking, like watching the adult site and playing online games, are viewed as the most predominant deviant behaviour (Graf, 2019; Janicke, 2018). Past research likewise refers to cyberslacking as counterproductive work behaviour, which damages the reputation and goals of the association and

organization (Farrastama, 2019; Huma et al., 2017; Koay, 2017; Palmer, 2017).

Despite the developing collection of research on data innovation bringing up approaches to decrease the cyberslacking behaviour, there are deficient measures and empirical research. Past research has shown that forerunners of cyberslacking incorporate work environment are climate (Setiawan, 2019), status (O'Neill et al., 2014), independence (Flanigan, 2018), character (Ngai, 2015), habitual utilization of media and sexual orientation (Duffy & Pruchniewska, 2017). Enlivened by the new advancement of data innovation, the past research presents enterprise social media (ESM) (Aral, 2013; Wagner, 2014) as another predecessor of cyberslacking.

In the past research it was reported that until this point in time, there has been little exploration on the best way to decrease cyberslacking. The study has shown that cyberslacking is at its peak and endeavours to hinder it has had restricted achievement. In any event, when discouragement endeavours are fruitful, they can have another possibly unsafe impact. For instance, it was found that the aspect of monitoring the employees appear to keep them away from wasting time on personal purpose tasks (Pearson & Urgin, 2008).

Cyberslacking is a contemporary deviant behaviour incited by mechanical or technological development. Researchers have contemplated that young executives are more bound to be engaged in cyberslacking (Dhir & Luqmans, 2021). Also, workers who are working on high status are more likely to be involved in cyberslacking behaviour as compared to other employees (Luqman & Dhir, 2021). Cyberslacking in the work environment included spending work hours online shopping, visiting various pornography websites, and also visiting different social networking sites (SNS) for individual use (Hernandez, 2016). Irresponsible employees who excessively use the smartphones and internet not just present genuine dangers to their associations when they neglect to follow data security and internet use approaches or policies, yet additionally, such overuse could prompt

decreased occupation quality and lost efficiency (Donahue & Rahman, 2015).

Internet use for personal purposes of individuals in the work environment is a type of counterproductive behaviour which results are typically viewed as negative. The behaviour ranges from pointless internet browsing to non-work-related utilization of the internet for personal goals. In one research, it was discovered that employees consumed at least one hour on non-work related activities during a routine working day, particularly utilizing the internet for individual reasons (Jamaluddin et al., 2015).

It was demonstrated that around 30-50% of internet utilization at work is non-work related, causing yearly losses. The origination of individual mobile internet devices in the market, (for example, smartphones, tablets, and versatile broadband) further raises the circumstance whereby people can associate with the internet where ever and whenever they want. Employees would have the chance to channel their efficient time towards non-work-related activities by utilizing their versatile internet gadgets such as smartphones. In any case, bosses have been found to see the utilization of individual portable web gadgets as an approach to be associated with workers, increment efficiency, and improve client benefits and may bring about expanded employee commitment (Jamaluddin et al., 2015).

Cyberslacking at work has been demonstrated to be on the rise. In addition, cyberslacking has been contrasted with the utilization of the smartphone for an individual reason since it was first presented, bringing about decreased profitability at the workplace. The utilization of smartphones for individual reasons at the workplace has made a paradox. On one hand computers (for example the web, email, social networking sites) provided employees with approaches to build profitability, accomplish business processes with higher productivity, then again, such resources have given chance to cyberslacking. Consequently, cyberslacking concerns have put managers in danger for the

honesty and security of their email systems as well as networks (Hernandez et al., 2016).

Employees visiting unreliable sites, downloading spiteful file attachments, playing online games can cause loss of trade secrets, penetration of classification, just as a break of organization security. Employees taking part in gaming, visiting porn sites, watching content on YouTube can conceivably put hefty interest on computer resources and transmission capacity, also make liability exchanging inappropriate content (Hernandez et al., 2016).

Attempts to clarify cyberslacking have made fluctuating differentiations among various sorts of cyberslacking. Lim and Teo (2005) have isolated browsing activities from email-related activities. It was suggested that deviant behaviours changed by reality, just as whether they were relational or authoritative. Drawing from this typology, Blanchard and Henle (2008) had split cyberslacking into minor (e.g., perusing individual messages) and major (e.g., downloading porn) classes. They found that impression of what different employees were doing clarified minor instances of cyberslacking (e.g., internet shopping), yet not major or serious cases (e.g., web-based betting). It was tracked down that 88% of respondents in the investigation said that cyberslacking was worthy when they saw different workers being occupied in similar behaviour (Vitak et al., 2011).

Chen et al. (2019) showed that the long term appeasement in smartphone use among individuals could be credited to the simple openness of their electronic gadgets to the internet that empowers their interest in an assortment of amusement and social activities (e.g., internet games, movies, and online media) even during working hours that at last prompts cyberslacking behaviour.

The huge expansion in smartphone use and their capacities permit everybody to get to the internet, communicate and amuse themselves at any time or any place. Even though there are loads of advantages of a smartphone if appropriately used like connectedness, expanded efficiency, accessibility of information, transferability, however then again excessive smartphone use or

addiction may prompt negative health results like neck torment, mishaps, loss of control and poor sleep quality (Hwang et al., 2016).

### **Sleep quality**

Sleep is vital for employees' wellbeing, security, prosperity, and efficiency (Garbarino et al, 2016, Garbarino & Magnavita, 2017). Inadequate sleep can have genuine unfavourable consequences for intellectual performance, including careful consideration (Hudson, 2019), capability, chief working and execution, memory and emotional functions (Cousins & Fernández, 2019).

Various speculation in past have been proposed to clarify the process of disturbed sleep because of uncontrolled and excessive utilization of electronic media gadgets like a smartphone that meddles with sleep through expanded psychophysiological alertness or activation, through splendid light revelation which may defer the circadian rhythm, and exposure to electromagnetic radiations and physical uneasiness brought about by excessive media use for a long time (Hysing et al., 2015).

Restoring sleep is firmly connected with a stronger physical, intellectual, and mental prosperity in grown-ups as well as in kids and teenagers. Episodic memories are steadily acclimatized into long term memory and this cycle is emphatically impacted by sleep and existing memories are immediately reactivated and strengthened in the brain during sleeping time. Sleep issues and lack of sleep lead to poor work performance and extreme daytime tiredness in employees. The study also demonstrates that adults often utilize their smartphones even when they get into their bed, before sleeping (Akilli & Gezgin, 2016).

It has been accounted for that dangerous internet use may influence the pattern of sleep and production, for example, by lessening rapid eye movement (REM) rest, moderate-wave sleep, and sleep proficiency, or that the splendid light of a smartphone screen may repress melatonin discharge



and defer the sleep onset. It was accounted for that the unfavourable impact of electromagnetic fields radiated by smartphones on sleep electroencephalograms. It was additionally demonstrated that electromagnetic field exposure (smartphone utilization) in the evening impacts physiological factors, for example, sleep quality and the melatonin rhythm, likely by affecting the brain activity especially that of the pineal organ, it might likewise bring about changed cerebral bloodstream, brain electrical activity and defer circadian rhythm, the body's ordinary sleep-and-wake clock (Carter et al., 2021).

With the expanding prominence of smartphones along with all its advanced innovation and technology, the utilization of the smartphone before sleep has become a propensity for young people and adult ones that could delay sleep latency and lessen sleep duration or span (Chen et al., 2019). Gender difference in proneness to smartphone and internet-related sleep disruption, research formed on 4,750 teenagers has shown a critical increased danger of poor sleep quality and smartphone addiction in women when contrasted with men (Chang et al., 2018). The issue was additionally featured in another research showing an essentially higher effect of excessive smartphone use on mental and behavioural aspects in women than that on men (Yang et al., 2018).

People having less self-control have a lower level of inner voice and have a higher utility for unlawful behaviour since they place more worth on the prompt advantages and consider the deferred costs less when contrasted with the persons having high self-control. This remains constant with regards to cyberslacking where people that rate low in self-control have reported a more noteworthy tendency for cyberslacking.

## **Self-control**

Self-control is a significant part of stable psychological functioning, and it changes one's reaction when granted inconsistent and clashing preferences (Liu & Zhu, 2020; Pilcher, 2015). Past research has uncovered that self-control is an ability to control a person's needs, wants or activities

with the ultimate objective to get changed and to guide oneself with the objective that one's activities reliably move toward achieving goals (Hong & Kim, 2012). Furthermore, it merges the conscious balancing activity of unfortunate reactions. This exhibits that self-control depends on delayed results when one needs to choose. In the context of this, individuals control their behaviour with insightful correction of automated activity. This is a fundamental factor in the smartphone and online conditions (Liu & Zhu, 2020). Perceived behaviour control alludes to a person's apparent trouble or proficiency to act out the behaviour (Ajzen, 1991; Askew et al., 2014).

Past research has exhibited that for people who have low self-control, smartphones highlight versatility and movability which may turn into a significant method to direct their negative feelings, practices and behaviours (Jiang & Zhao, 2016). Most significantly, the negative state of behaviour is capable to interfere with self-control and hence bring about compulsive smartphone use that prompts cyberslacking even in the work environment. Past researchers have accepted that smartphone addiction is a problem or disorder of impulse control and collapsed self-control. Past research results demonstrated that self-control is conversely associated with smartphone addiction (Pessoa, 2015).

Addictive practices include a deficiency of self-control. In the present circumstance, it tends to be stated that when employees have an issue in controlling their utilization of smartphones, all things considered, they have smartphone addiction, so consequently improving their self-control abilities will be successful in diminishing or wiping out this dependence or addiction (Bolle et al., 2015).

Individuals who experience issues controlling themselves are supposedly incapable to control the utilization of their smartphones. Absence of self-control can likewise interfere with focusing power during work, increment unessential manners of thinking and increment the recurrence of smartphone use. In a perfect world an individual can handle himself to act as per the standards

winning in the public eye, so that at the point when somebody is confronted with a smartphone, they can control themselves in utilizing their smartphone (Isrofin & Munawaroh, 2021).

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Self-control is a steady and particular human characteristic portrayed by the balance and regulation of affect, behaviour, and insight towards the fulfillment of objectives. As per the strength model of self-control, endeavouring and applying self-control in one action may consume self-control strength that is applied to successive actions. All in all, self-control might be related to restricted resources and that people can just control a specific number of desires at some random time. Additionally, the strength model of self-control perceives individual differences in self-control strength. Some people have more prominent self-control strength than others. People low in self-control have lower subjective well-being and a more noteworthy inclination to encounter burnout and take part in workplace deviance that prompts cyberslacking. Hence, past researches discovered a negative connection between high self-control and cyberslacking behaviour. Nagin and Paternoster's (2012) outcomes show that people who are low in self-control see a higher utility for unlawful, illegal or deviant behaviour since the rewards are quick, and would limit the expenses since they are postponed and have less evolved consciences, making self-reproach less viable. They tracked down that low self-control emphatically affects a person's aim to participate in different kinds of illegal or deviant behaviour, which we expect will be similar with regards to cyberslacking. It concludes that

people that are low in self-control will have a more prominent history of cyberslacking.

The impact of low self-control on cyberslacking might be provoked when it happens related to certain situational factors. This suggestion draws on Gottfredson and Hirschi's general theory of crime (1990) which places that people with low degrees of self-control are bound to react to situational triggers with negative behaviour and practices whenever offered the chance to do as such. Specifically, low self-control may fill in as a susceptible component that brings about counterproductive practices and behaviour, for example, cyberslacking, particularly within the sight of certain situational triggers (Amarnani et al., 2011).

## **1.1 Rationale**

Smartphone addiction and cyberslacking in Pakistan has stayed a subject of worry throughout the last numerous years. As demonstrated by past researchers, the continuous and repeated use of smartphones may cause addiction. Smartphone applications lead individuals to check their phones continuously (Bolle et al., 2015; Negahban & Salehan, 2013). This inclination for checking thusly impacts individuals to utilize their smartphones significantly more that lead towards cyberslacking conduct due to low self-control (Oulasvirta et al., 2012).

Some theoretical work and empirical information have been given to direct researchers in inspecting the effects of smartphone utilization. It was tracked down that the utilization of social media is a significant factor for smartphone addiction. Aside from smartphone addiction, self-control and order of life get adversely affected due to unreasonable and excessive utilization of smartphones. It is additionally basic at the workplace, that numerous individuals enjoy performing cyberslacking behaviour at work during working hours, people with higher self-control have high control level in reducing the chance of performing cyberslacking behaviour as they have innovative competency regarding internet use, smartphone use and also against cyberslacking behaviour (Javaid et al.,

2020).

Cyberslacking may rise with the utilization of smartphones and may crumble work performance. However, an enormous part of exploration has been conducted in the western perspective where there is high smartphone utilization in the associations. In developing nations like Pakistan, there is also a high proportion of smartphone utilization and cyberslacking, along with that employees also experience adverse effects of sleep disturbance or poor sleep quality on their work performance, productivity and health, but no particular investigation has been carried out.

Sleep is an important factor of human wellbeing and healthy day to day functioning but is frequently underestimated in numerous associations and organizations. Sleep impacts various aspects of a worker's work performance and productivity including the capacity to satisfactorily react too quickly changing work requests and stress-inciting conditions and associations. Poor or insufficient sleep additionally adversely affects some more drawn out term factors pertinent to organizational conduct an individual's wellbeing including self-control, health and ability to make decisions, abstract effort, immunosuppression, work performance and productivity (Morris & Pilcher, 2020). In the Pakistani context, this study will assist to classify the impact of each variable on one another.

Now a days, addiction isn't just about drug or substance misuse, it also infers to gambling, web browsing, gaming or even smartphones. Smartphone addiction is at extreme nowadays since the utilization of smartphones is expanding gradually so more use of smartphones leads towards its addiction and cyberslacking behaviour. The smartphone addiction issue is presumably going to make a real addiction issue for an individual with low self-control and poor sleep quality. Self-control empowers people to have the option to cope with terrible encounters and deal with the feelings, emotions, insight and behavior adequately so that self-control works as a cushion for the antagonistic

impacts of hazard factors both from internal and external issues of the person and society (Niu et al., 2020). So when self-control decreases, person will indulge in more usage of smartphone even during working hours (cyberslacking behavior) and become smartphone addicted.

Smartphone addiction is not limited to a particular everyday issue. Smartphone addicted individuals become a victim and proceed with the utilization of smartphones even during study hours, sleeping time as well as work time. At the point when an individual becomes the sufferer of smartphone addiction and cyberslacking then they couldn't have sound sleep as they devote a large portion of the time on smartphones at bedtime, as a result of this their pattern of sleep will get affected and issue in sleeping persistently for few hours will emerge. According to a report by World Health Organization (WHO, 2021), excessive use of mechanical gadgets in late sleeping hours upsets the sleep cycle of a smartphone user. A large number of the analysts found such conduct, and they presented the expression "Cyberslacking". While improvement in technology has prompted developmental changes in the state of affairs done in associations and in the productivity and execution of employees, these advances have likewise offered a few chances for people to show unwanted organizational practices and behaviours (Ghallab, 2020; Osailan, 2021; Shoukat, 2019).

Although previously many studies have been conducted worldwide pertinent to cyberslacking, smartphone addiction and self-control less has been explored with its impact on quality of sleep in employees and specifically with reference to Pakistan no such research has been conducted. This research also aims to identify and fill the gap existing in the Pakistani literature pertaining to cyberslacking and smartphone addiction coupled with sleep deprivation in employees. Data of the current research will be collected from different organization of private and public sector just to get the detailed in-depth analysis from maximum resources to support the study variables with different evidences. Besides, Covid-19 crisis will also be the reason for collecting data from different

organizations as it will be not possible to achieve the set sample criteria from few sources. The present study will highlight the implication of self-control with reference to excessive use of smartphone addiction and its outcomes like cyberslacking behaviour and sleep quality. Furthermore keeping in view the significance of self-control study will explore the mediating role of self-control and moderating role of gender in the relationship between smartphone addiction, sleep quality and cyberslacking.

As smartphone addiction is a matter of concern for employers and organizations so much need is there to figure out its importance in terms of the Pakistani context and its adverse effects on employees performance, sleep, self-control and behaviour.

## **1.2 Statement of the Problem**

A smartphone addiction is a matter of concern for employers and organizations so much need is there to figure out its importance in terms of the Pakistani context and its adverse effects on employees performance, sleep, self-control and behaviour. Because there is a gap in literature of smartphone addiction, cyberslacking and self-control in terms of their effect on sleep quality among employees. Employees productivity, performance, quality of sleep and self control is being effected by the excessive usage of smartphones even during working hours i.e cyberslacking so there is a need to highlight its significance and to figure out the outcomes.

## **1.3 Research Objectives**

The study intends to meet the following objectives:

1. To investigate the predictive relationship of smartphone addiction with cyberslacking and sleep quality.
2. To investigate the mediating role of self-control between study variables.
3. To explore the moderating role of gender between study variables.

4. To explore gender differences in study variables.
5. To investigate the mean difference across different age groups and education levels of participants on study variables.

## **1.4 Research Questions**

Q1: What is the relationship between the study variables of the current research?

Q 2: How does smartphone addiction effect the cyberslacking behavior, sleep quality and self control in employees?

Q3: What role smartphone addiction and cyberslacking plays between sleep quality and self-control?

Q4: Does smartphone addiction predicts the cyberslacking and sleep quality in employees?

Q5. Does the lowering in self-control increases the smartphone addiction and cyberslacking?

Q6. Does smartphone addiction and cyberslacking has a poor effect on sleep quality?

Q7. Does gender play a role in current study variables?

## **1.5 Null Hypotheses**

To meet the objectives of study following hypotheses were formulated:

**H1:** Smartphone addiction does not positively correlated with cyberslacking

**H2:** Smartphone addiction does not positively correlated with poor sleep quality.

**H3:** Smartphone addiction does not negatively correlated with self control.

**H4:** Cyberslacking does not positively correlated with poor quality of sleep.

**H5:** Cyberslacking does not negatively correlated with self-control.

**H6:** Poor sleep quality has not a significant negative relationship with self-control.



**H7:** Gender does not differ significantly in smartphone addiction, cyberslacking, sleep quality and self-control at workplace.

**H8:** Self control does not mediates the relationship between smartphone addiction and cyberslacking.

**H9:** Self-control does not mediates the relationship between smartphone addiction and sleep quality.

**H10:** Gender does not moderates the relationship between smartphone addiction and self-control such that relationship is stronger in females than males.

**H11:** Gender does not moderates the relationship between self-control and cyberslacking such that relationship is stronger in females than males.

**H12:** Gender does not moderates the relationship between self-control and sleep quality such that relationship is stronger in females than males.

**H13:** Government and private sector employees does not differ significantly in smartphone addiction and cyberslacking.

## 1.6 Conceptual framework of the Study

The current study has designed the research model with smartphone addiction as an independent variable, while cyberslacking and sleep quality as a dependent variables, with self-control as a mediator and gender as a moderator.

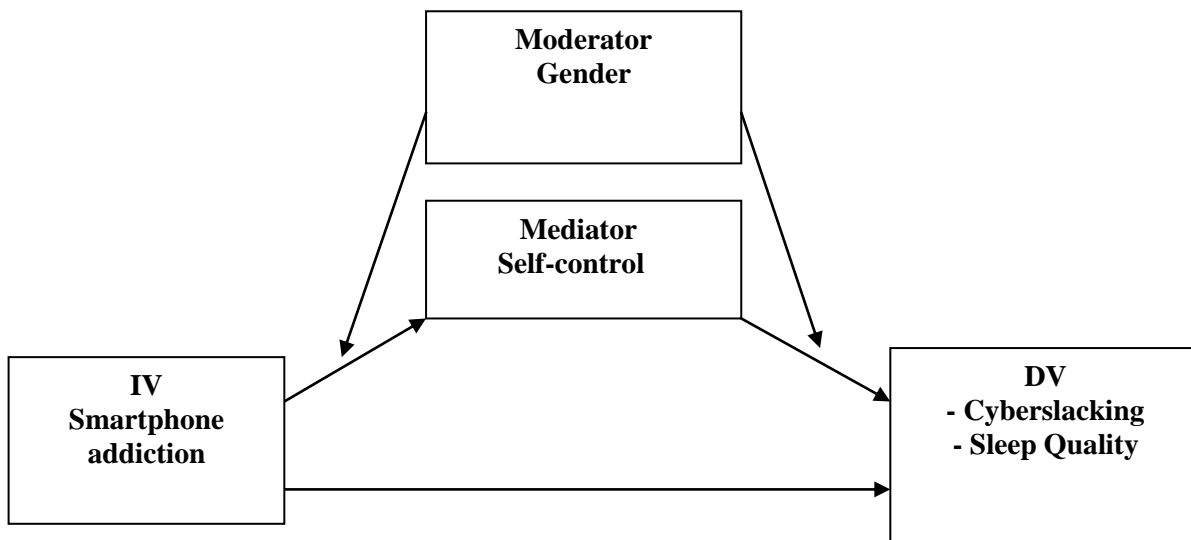


Figure 1: Moderated mediation model

Figure 1 displays a conceptual model of moderated mediation between smartphone addiction, cyberslacking and sleep quality. Self-control is supposed to act as a mediator and gender as a moderator. This model is fundamentally upheld by the self-control theory that is given by Gottfredson and Hirschi (1990). The self-control theory, created by Gottfredson and Hirschi (1990), is a theory that clarifies how the absence of self-control is considered a significant factor behind the deviant act. In view of this concept, deviant conduct is a declaration of low self-control. Henceforth, with low self-control, people will in general take part in deviant conduct in light of the fact that such demonstrations bring about the quick satisfaction of their cravings. Furthermore, low self-control

people will in general need steadiness and their inclusion in deviant conduct focusing on their tendency for guaranteed fulfilment and inability to concede joy. It very well may be contended that people will in general take part in deviant conduct, for example, cyberslacking to look for joy since it is a simple demonstration and a straightforward method for fulfilling one's desires. It was tracked down that self-control is a significant indicator of deviant conduct. Another study shows that an absence of self-control prevent people from coping to web and smartphone addiction and ends up cyberslacking (Davey et al., 2018). Additionally when indulge in more cyberslacking behavior that internally, mentally and socially effects person and disturbs the quality of sleep and behavior.

As per Gottfredson and Hirschi (1990), self-control is a factor that is created since childhood through powerful nurturing, set up at a young age, and stays stable at the adult age, also assumed as a significant part in clarifying the distinctions in deviant behaviour across people. In particular, it has been noticed that reliable parental observing and order, along with affection, love and care, prompts the foundation of self-control. Through parental socialization, women will in general create more noteworthy self-control when contrasted with men and that gradually develops with developing age. In light of this theory, it has been contended the fact that many people viewed women as in more danger than men regarding misconduct. Parents will in general keep an eye on the behaviour of young women more cautiously than that of young men. This abundance of observing may proceed till adulthood as society endeavours to reduce chances of misconduct among women. Since social worthiness or acceptability is firmly connected to women role. Caregivers usually interact more with young women so that misconduct is diminished. Thus, women will create more prominent self-control when contrasted with men, and they will in general connect less in deviant conduct.

The inference of this model on present research exhibits that self-control mediates the relation between smartphone addiction, cyberslacking and rest quality. At the point when self-

control is low, higher will be the smartphone addiction and the result will be poor sleep quality and cyberslacking behaviour. Higher self-control will lead towards better sleep quality.

As per conceptualized model gender moderates the relationship between smartphone addiction, cyberslacking, self-control and sleep quality. This study aims to examine the interaction between IV and DV by moderating the effect of gender. As per the proposed model, the current research will look into whether men have more smartphone addiction because of low self-control that eventually leads towards cyberslacking and poor sleep quality or women.

### **1.7 Significance of the study**

This study will be significantly endeavoring in highlighting the importance of smartphone addiction, cyberslacking, sleep quality and self-control among employees of different organizations of Pakistan. When diagnosing a smartphone addiction, it is just as important to consider the cyberslacking behavior with their effect on sleep quality and self-control since they play a vital role in performance, productivity, sleep latency, quality and duration along with the intensity of self-control. In this respect, smartphone addiction and cyberslacking. has been shown to be a challenge for the organizations and to the productivity and well-being of the employees. Awareness of the need and importance of smartphone addiction and cyberslacking aspects in in organizations and also in day to day life, and diagnosis of this type of behavior along with their impact on sleep in Pakistan is very low. Consequently, the main goal of this study is to examine the relationship of smartphone addiction cyberslacking, sleep quality and self-control among employees. Concerning current study, it is important to consider the fact that lack of self-control contributes in performing the deviant behavior i.e. excessive smartphone usage and cyberslacking.

Discoveries of current study will assist the psychologists, social scientists, policy makers and heads of organizations, psychiatrists and professionals in identifying the smarttphone addiction and

cyberslacking behavior in employees of different institutions and organizations, which can impact the sleep quality and self-control of them. Another main significance of the current study is that it contributes in the literature regarding these particular issues.

## **1.8 Methodology**

Several principles have been applied in incorporating relevant research. We first searched the principal academic databases for keywords. we focused on theoretical perspectives and future directions. For instance, only published papers were examined. Every research topic on the concordance of values tends to have specific theoretical perspectives. We looked at the studies according to different themes, which not only clarified the background and results but the congruence of values. This also helped the discussion of the underlying theoretical evolution. examining each theme, we first presented the theories and then examined the empirical results of see how these theories were confirmed or challenged. After these discussions, gaps in research and future directions were identified.

## **1.9 Delimitations**

The research, despite being very useful, has some limitations and delimitations too. The first delimitation is current research focused only on employees but not on other respective sample of different fields and areas. Another delimitation of this research comprises the shortage of availability of time and funds to collect data because of the lock-down from the Government of Pakistan to curtail the Covid-19 pandemic.

## **1.10 Operational definitions of study variables**

### **1.10.1. Smartphone addiction**

Smartphone addiction is the extravagant and excessive utilization of smartphones in a manner that is hard to control and its impact reaches out to different life issues in a negative manner (Cevik, 2016). Smartphone addiction is considered as the powerlessness to control the smartphone use in spite of adverse consequences on users (Deursen, 2015). Urdu translation of Smartphone Addiction Scale-Short Version (SAS-SV) will be utilized to measure the smartphone addiction among employees.

### **1.10.2. Cyberslacking**

Cyberslacking is the unapproved utilization of the internet for non-work or individual activities during work time (Pearson& Urgin, 2013). Cyberslacking is an employee's utilization of smartphone and different internet resources during work hours for non-work related purposes. At the point when a employee is cyberslacking, the individual will utilize these resources for individual affairs and for entertainment purposes (Kenton, 2018). Urdu translated version of Cyberslacking Scale was utilized to measure the cyberslacking behavior among employees in current research.

### **1.10.3. Sleep quality**

Buysse (1989) author of PSQI scale, defined "great" subjective sleep quality as one's perception that they fall asleep effectively, get sufficient duration in order to awaken feeling rested, and can endure their day without encountering unreasonable daytime sleepiness. Urdu version of Pittsburgh Sleep Quality Index (PSQI) scale (Firdaus et al. 2020) was utilized to measure the sleep quality among representatives/employees.

### **1.10.4. Self-Control**

Self-control is depicted as the capacity to control with no external imperativeness to endeavor to act with the most ideal lead without looking for minute fulfillment yet think about the

future outcomes (Koo, 2012). Self-control is characterized as the capability to observe, hinder, continue on and adjust behavior, feelings, thoughts, and wants to accomplish a specific objective (Moffitt, 2011). Urdu version of Brief Self-control Scale (Kausar & Zafar, 2014) was utilized to measure the self-control among employees.

## **Chapter 2**

### **Literature Review**

Following researches have been done in the past on smartphone addiction, cyberslacking and self-control among employees yet regarding these variables less have been investigated corresponding to sleep quality.

The past research gives an understanding of smartphone utilization, the pervasiveness of smartphone addiction and associated hazardous factors in Pakistan. The pervasiveness of smartphone addiction was discovered to be 60.10% which is high when contrasted with the proportion recognized in Western or European nations, and some other Asian nations, including the adjoining nations like Iran and India (Ahmad et al., 2020).

#### **2.1 Smartphone Addiction related researches**

Having achieved a wide pace of utilization, smartphones are currently a choice that is other than techniques for communication or correspondence and affect human existence in a broad assortment of courses, particularly as they are the contraptions that are in nearest reliably actual contact with people (Chang et al., 2014). The sequential and gradual length of calling and the number of messages sent are identified with hazardous smartphone use (Augner & Hacker, 2012). Hence, excessive and meaningless use of smartphones leads to smartphone addiction (Augner & Hacker, 2012, Kwon et al., 2013, Lee & Lin, 2015). A Smartphone application builds up the propensity in individuals to constantly check their smartphones and this, at last, transforms into addiction (Makhdoomi et al., 2018).

As demonstrated by past studies, the continuous and reiterated use of smartphones may lead



to addiction. Smartphone applications urge individuals to check their smartphones continually constantly and all the time (Bolle et al., 2015; Carbonell & Panova, 2018; Negahban & Salehan, 2013). This inclination for checking impacts individuals to utilize their smartphones more significantly (Carbonell & Panova, 2018; Oulasvirta et al., 2012). Individuals often don't switch off their smartphones, don't go to any place without them, and utilize them for various reasons like business, entertainment, contemplation for and socialization and connection with people etc (Bolle et al., 2015).

One study demonstrated that the duration of smartphone usage is the main factor in developing smartphone addiction so it's important to explore this factor in measuring addiction to smartphones in the studies. Considering the expanding pace of smartphone use in our day to day routine and life, it is very much necessary to control the rate of smartphone usage and this brings the place of smartphones in the contemporary world into a conversation. Dependent clients have an issue in controlling their measure and proportion of smartphone use. The way that smartphones are consistently inside the person's reach implies that smartphone addiction is unique to other kinds of addiction, and this represents a danger. Smartphone dependence may restrict a person's capacity to speak with his family and other people in the surroundings. it limits the connection with the outer world (Cevik et al., 2016).

Smartphone Addiction can be impeding to employees and institutions, companies or organizations as it can prompt hindered focus and diminished usefulness. With increasing reliance on smartphones for addressing different requirements at work, a developing number of working individuals have been accounted for to have smartphone addiction manifestations. For example, a worldwide study of 1,800 employees tracked down that 60% of them encountered symptoms of smartphone addiction, for example, checking their smartphones impulsively during the day and

feeling troubled and bothered on the off chance that they couldn't utilize their smartphones continually during working hours (Fortt, 2012; Lin and Trisha, 2017).

## **2.2 Relationship of Smartphone Addiction, Cyberslacking and Self-Control related researches**

Self-control plays a significant role in smartphone addiction and adjusting activities. The previous exploration uncovered that the lower is the self-control, the more will be the smartphone addiction. So to speak, people with a high degree of self-control are going to have less smartphone addiction and also cyberslacking behaviour. For example, it is shown that self-control level expected smartphone dependence or addiction inconsistent and unequal among employees. Similarly, the extent to which self-control limit is lower, degree of smartphone addiction and cyberslacking will be higher (Cho et al., 2017; Hwang et al., 2016).

Self-control is depicted as the capacity to control oneself with no external imperativeness to act with the most ideal lead without looking for minute fulfilment yet thinking about the future outcomes (Koo, 2012). This demonstrates self-control relies on results when we are settling on a choice about if we need to bring about a certain behaviour or not (Shin, 2014). Thinking about this, people control their conduct and behaviour with the proposed transformation of motorized action. This is a fundamental factor in utilizing smartphones and getting to online sites.

The past research stated that self-control is an ability to control oneself from the thing that is not suitable for a person to do and has bad consequences as well. Furthermore, it likewise incorporates the prevention of unfortunate reactions consciously. This implies that self-control relies upon long term results during decision making. Self-control assumes a significant part in cell phone dependence and counteraction. The past research also uncovered that the lower self-control, the higher was the smartphone addiction. At the end of the day, those with high self-control are probably

going to have a lower smartphone addiction. For instance, it showed that self-control level anticipated smartphone dependency that ultimately leads to smartphone addiction. Likewise, it showed that lower self-control capacity expanded the probability of developing smartphone addiction. Rigorously, immediate and instantaneous fulfilment affected smartphone addiction and long term fulfilment just impacted smartphone addiction of females. Likewise, rapid and instantaneous fulfilment was a critical indicator of smartphone addiction while long term fulfilment was not. Nonetheless, clashing outcomes were likewise revealed. In the past research, it was also revealed that self-control was not found to significantly affect smartphone fixation. At the end of the day, immediate and quick fulfilment, long term fulfilment didn't anticipate smartphone dependency/addiction. Consequently, various outcomes concerning self-control and smartphone addiction have been introduced (Cho & Lee, 2015).

The advancement of self-control among employees is necessary. To put it in another way, smartphone addiction could be regulated by reinforcing self-control. Self-control fills in as a defensive factor against the adverse consequence of smartphone addiction on employee performance and productivity at work. Consequently, it is imperative when creating smartphone addiction seminars and programs to view self-control which manifested directing impact. Taking everything into account, the research demonstrated that the various aspects tended to discuss the smartphone addiction might be fixated on the requirement for better self-control, conceivably relating to managing the time effectively as recommended by (Abiodun et al., 2021).

Addictive practices are imparted to assimilate lost self-control (Deursen et al., 2015). In this situation, it will in general be acknowledged that when employees have an issue in managing their smartphone use, almost certainly, they will become dependent on their phone and have smartphone addiction, so, therefore, improving their self-control capacity will diminish or clear out this

addiction.

### **2.3 Cyberslacking related researches**

Cyberslacking implies that employees utilize their organizations' internet access for non-business or non-work-related purposes during working hours and workers' deliberate utilization of their associations' internet access for personal purposes at the workplace during work time (Dilchert et al., 2018).

The behaviour that is considered as off-task behaviour "is not another marvel, the idea of how employees utilize portable innovation today has situated cyberslacking as a more strong interruption source than those looked at by past ages of workers or employees. For example, employees have portrayed how the ongoing utilization of online media and smartphones has caused a circumstance wherein it is hard to abolish this acclimated behaviour while managing work during working hours (Bleboo et al., 2021).

Numerous types of cyberslacking like having a long lunchtime, talking with colleagues, arriving late than fixed schedule, and leaving early are recognized as slacking practices. Nonetheless, cyberslacking doesn't need an individual to be genuinely missing from the workplace for quite a while, and employees can be occupied with cyberslacking practices even without leaving their desks. In this way, first and foremost it is hard to recognize employees' cyberslacking practices just through perception. Second, it causes significantly more genuine damage to workers' profitability (Lim & Chen, 2012), and diminishes the advantages of companies (Nair, 2005; Jia, 2013). A few investigations have uncovered that cyberslacking practices broadly existed in a working environment. It doesn't just diminish employees' efficiency by 30–40%, yet it additionally leads to an enormous financial loss of companies every year (Malachowski, 2005). At times, employees' cyberslacking practices (e.g., downloading music, getting to pornography sites, reviewing or sending

hostile material) can even put the companies in danger (Liu et al., 2015).

## **2.4 Relationship of Cyberslacking and Self-Control related researches**

Many clarifications have been offered for cyberslacking. Chen (2019) found that employees who have a high degree of external locus of control (i.e., they accept their destiny is in others' grasp) and those with low confidence expressed decreased self-control of internet and smartphone use (e.g., they encountered side effects of withdrawal when they couldn't enjoy cyberslacking), which thus influenced their degree of internet and smartphone excessive usage at the workplace even during work (Lim, 2020).

One past research has investigated the fact that whether employees' dissatisfaction with their positions or job prompts cyberslacking, additionally the commitment in such activities mirrors the cyberslacking behaviour in different conditions. Garrett and Danziger (2008) secured that nor one's position or job-related feeling of anxiety nor their work fulfilment was identified with the measure of time spent utilizing the internet for non-business or non-work-related activities. Among the elements that affect the degree of cyberslacking, the anticipated results of such activities had the most grounded impact; all in all, individuals who recognize their internet use as valuable to their general job accomplishments and performance were involved more in cyber slacking than others. The individuals who utilized the internet at the workplace during working hours as a component of an ongoing routine were likewise bound to participate in personal use at work. Contrarily, employees who were more dedicated to their work and who might confront more grounded punishments for taking part in deviant practices were more against cyberslacking. This discovery negated earlier work (Lim, 2002), which proposed that employees occupied with cyberslacking to give response to unfair higher management. All things considered, these discoveries upheld Lim (2002) discoveries that one's very own propensities are the best single indicator of cyberslacking.

One study revealed that those employees who are working as managers, administrators, experts and professionals, have a good education and are highly paid are more into using the smartphone and internet for their purposes during the working hours as compared to those employees who are under them in the level of job status order (Dazinger & Garrett, 2008).

Rahimnia and Mazidi (2015) found that the self-control of employees was adversely related to their cyberslacking. There are additionally numerous empirical examinations supporting self-control as a defensive factor against troublesome internet use. Moreover, the ego-depletion model of cyberslacking proposes that when an employee is depleted of self-control, the individual in question is probably going to participate in cyberslacking.

## **2.5 Gender difference in smartphone addiction and cyberslacking**

Numerous researches have shown clashing outcomes regarding the impact of gender on internet and smartphone use (cyberslacking). It was revealed that women were more reliant upon smartphones than men were (Billieux et al., 2008). Women are bound to be engaged with their gadgets than men are (Walsh et al., 2011), Inferable from the distinctions in the reason for the utilization of smartphones. Men are bound to utilize their smartphones for useful purposes, for example, business or work-related use, while women are more into utilizing their smartphones to stay in touch with the individuals who are very important to them (Cohen & Lemish, 2005; Noyes & Rees, 2007). Consequently, it appears to be that men and women have diverse smartphone usage patterns. In a few studies, it was found that men employees were found to have a higher score of internet use for personal purposes and smartphone use when contrasted with their women coworkers (Jia, 2013; Vitak, 2011), even though Akman and Mishra (2010) and Nadasen and Seymour (2007) showed no huge distinction among men and women employees over internet and smartphone use for individual or personal reasons. In contrast, more men employees (12.2%) utilized the internet at

work for non-work purposes when contrasted with women workers (Frangos&Sotiropoulos, 2010) and were bound to take part in counterproductive work environment practices than women (Samnani, 2014). Contrastd with men, women are all the more sociable (Lee et al., 2014). For instance, women require a long time for calling than men do. This incorporates calls to companions or friends, client administrations, and sales calls. There are likewise differences among men and women in internet and smartphone use. While men are more in general utilization of the smartphone for more process or information-oriented gratification, women utilize the gadget more for socially oriented gratifications. Women use smartphones more than men to do gossip or keep up friendly connections and have a more grounded relationship with their smartphones. Consequently, social or you can say online media is generally interesting to women. Men utilize their smartphones more for playing games and are more into (phone) betting (Friebel & Seabright, 2011). In the Pakistani social setting, the chances for females to have real-life association and connection are restricted when contrasted with males. This plausible suspicion further confirms that females are more inclined to excessive utilization of smartphones for cooperation, interaction, association and relationship-building purposes (Khalily et al., 2020).

On the other hand, Frangos and Kiohos (2010) recognized that men are more expected to become smartphone addicts because of betting, game playing, and watching pornography. It was set up that men are probable to be game addicts and that their inspirations for substance misuse are not quite the same as those that have no inspiration for gaming or substance misuse. Lower levels of self-control and everyday life fulfilment were related to unnecessary and extreme game playing in men however not in women. Taken together, these opposing discoveries offer deficient support to the conflict about notable gender differences in addiction. However, it can be anticipated that women and men build up an addiction in various manners because of various utilizations, various

inspirations, and various interests in usage gratifications. A few types of research have uncovered that women are more prone to have smartphone addiction in comparison to men, one more investigation was conducted in which it was found that women were more tend to be smartphone-dependent and addicted than men (32.6% and 10.4% respectively). Women have more propensity towards the social relationship, accordingly, they invest very great energy either they are at home or work, on utilizing social media sites, for example, Facebook, WhatsApp, Instagram, and other social networking sites which lead them, in the end, to get dependent on their smartphones and become smartphone-addicted. However, men are seen to be more vulnerable to the internet and offline gaming and programming than women (Abid et al., 2020).

## **2.6 Job sector wise differences in study variables**

A previous study finding was that the propensity of the public sector employees has a strong effect on cyberslacking behaviour. This specific result shows that in government organizations or associations, employees are bound to utilize the internet so it turns into their propensity. This propensity then, at that point further adds to anticipating cyberslacking. Then again, the employees of private associations show less impact of propensity over cyberslacking behaviour. This is because workers in private associations have less use of the web/internet at work. Another intriguing discovery of between-group contrasts seems, by all accounts, to be that working with a condition for utilizing the web/internet for individual purposes at work is more noteworthy in a government organization or association. Results show that government sector employees didn't face any kind of limitations or restrictions in using the internet for their purposes. Though, in the private sector, the climate which assists the workers with utilizing the web/internet for individual reasons and purposes is restricted. In any case, the opposite side of the image is that the employees of the private sector are as yet utilizing the internet at work for individual purposes (Rahim & Ramayah, 2017).



Jamshed et al. (2019) saw that individuals who experience weariness rely more upon their smartphones and use them improperly in any event even during working hours. At the point when they begin feeling weariness, they used to make calls or short messages from their smartphones, or they start to kill the time by doing internet browsing.

People of young age accept that smartphones have obtained a valuable change in their lives since it has made admittance to anyone wherever conceivable (Jamshed et al., 2019). Based on the utilization of smartphones, one investigation has referenced that individuals consider their lives inadequate without their smartphones (Donya & Kumah, 2011; Jamshed et al, 2019).

In one research it was tracked down that self-control couldn't clarify misconduct among various age levels. As cyberslacking conduct is frequently occupied with when employees approach and use the internet at the workplace during working hours, this could fill in as a situational trigger for the behaviour to occur, since the probability might be similarly accessible to young and adult employees both, almost certainly, the propensity to cyberslacking among both age levels isn't fundamentally unique (Ahmad & Omer, 2017).

## **2.7 Association of Smartphone Addiction, Cyberslacking, Sleep Quality and Self-Control related researches**

Jamshed et al. (2019) found that among the different antagonistic results of smartphone addiction, negligence of work, poor sleep quality, getting away from the real world, and lack of control are solid highlights. Besides, aggravation of flexible capacities and virtual life presentation are basic parts of smartphone addiction. It has been uncovered that 30-40 per cent of employees' work time is spent in using the internet for personal purposes that we observed as cyberslacking. One study revealed that people with low self-control reacts more to the situational triggers that trigger the cyberslacking behaviour as compared to those individuals who are high in self-control

(Amarnani et al., 2011).

Relevant to the utilization of the internet and smartphones, researchers have referred that if smartphones are used in the working environment, it will involve employees from work which will impact their yield limit, demonstrating that it will create the cyberslacking behaviour (Jamshed et al., 2019). Past studies recommend that cyberslacking has a negative connection with self-control and have a backhanded impact on sleep quantity and quality (Dust, Ji & Liu, 2020).

Al-Yousefi and Alshobaili (2019) have investigated the relationship between sleep time, utilization of smartphones and sleep quality in adults. It was discovered that there was a relat

## **2.8 Relationship between study variables**

Many studies directed in the past show some connection between factors of smartphone addiction, cyberslacking, sleep quality and self-control have a strong relationship with one another. Today, addiction is generally described as a joy-initiating behaviour that through repeated exposure moderately lead to loss of control and unfortunate or negative results. One grounded definition views addiction as a sort of conduct or behaviour where the individual encounters decreased control, along with hurtful results named as dependence or addiction, because of that the behaviour called "cyberslacking" will ultimately be developed (Khalily et al., 2020).

At the point when employees use a smartphone for activities not related to the workplace during the working hours and proceed with this behaviour on regular basis a troublesome behaviour known as cyberslacking which has a positive connection with smartphone addiction, for example, more elevated level of smartphone addiction may increment cyberslacking behaviour. On the other hand, for an individual who utilizes a smartphone for his reasons during working hours at the workplace and a high level of self-control also exists in him/her, at that point, there will be less chance to move towards smartphone addiction.

As expressed in one past research that when people high in self-control may all the more promptly defer gratification that they get from internet surfing and individual email use while at work. All the more significantly, the individuals who are high in self-control show a lower level of cyberslacking behaviour. People high in self-control have more capacity for abrogating their driving forces to fight back with smartphone addiction than those low in self-control. Along comparable lines, people high in self-control may have been more ready to reappraise the circumstance, repress their motivations, and occupy themselves away from participating in deviant behaviour, for example, cyberslacking (Wilkowski & Robinson, 2008). Self-control is contrarily connected with smartphone addiction and cyberslacking. The more self-control an individual has, the less cyberslacking conduct he/she is probably going to report. Sleep quality additionally gets influenced as individuals feel upset and have sleep issues when they are high on smartphone addiction and cyberslacking and have less self-control.

It has been demonstrated that sleeping pattern, sleep onset and sleep efficiency may be influenced by dangerous and excessive internet use (Bruns et al., 2007; Higuchi et al., 2005) that thusly influences the brain cognitive functioning which defers the beginning of sleep onset. Loughran et al. (2005) reported the unfavourable impact of outflow of raises by smartphones on sleep quality. Poor sleep quality corresponds with positive or negative feelings and self-control. Improving a person's sleep characteristics may prompt more positive feelings, lessen the negative ones, and these mindset changes may build assets for self-control. Controlling positive and adverse consequences may decrease the effect of poor sleep quality on self-control (Liu & Zhu, 2020).

## **2.9 Theoretical Framework**

The following theories provide support to the variables of the current research.

**2.9.1. Theory of Planned Behavior.** The theory was stretched out from the theory of

reasoned action that has been effective in anticipating significant behaviours in a wide assortment of areas (Ajzen, 1985). As per TPB, the intention is considered as the proximal indicator of the actual behaviour of a person. The intention of the individual to take part in a behaviour that is cyberslacking and smartphone addiction because of low self-control likewise impacts the sleep quality. Low self-control is directed by three key factors: attitude towards the behaviour perceived behavioural control and subjective norms (Ajzen, 1991). Attitude alludes to people's adverse or positive insight towards the result of a specific behaviour. In this research, the attitude alludes to cyberslacking during working hours at the workplace, unnecessary smartphone utilization that prompts dependence, sleepy quality and low self-control. At the point when an individual isn't smartphone-addicted, lesser will be simply the cyberslacking behaviour and self-control will be high with adequate sleep quality (Ajzen, 1991; Askew et al., 2014). Attitude incorporates both the instrumental (for example comfort or inconvenient) and the affective (e.g., energizing or dull) appraisal of the behaviour.

Subjective norms allude to an individual's impression of whether cyberslacking and smartphone utilization are socially adequate and their inspiration to agree with these perspectives. People frequently follow the environmental cues to act in a socially "suitable way" to follow the norms for acceptable behavioural representation. At the point when an individual sees that cyberslacking during work and utilization of smartphones to be socially satisfactory, they are bound to cyberslacking without being bothered about disregarding group or organizational standards and norms (Galluch & Thatcher, 2011). Perceived behavioural control means the comfort or hurdles a person face to perform a certain behaviour and addresses both internal control (an individual's ability and competence) and external restrictions (available opportunities and provided facilities). Individuals' perceived behavioural control concerning the utilization of smartphones at the

workplace during working hours may prompt and diminish cyberslacking behaviour. To survive or control the cyberslacking behaviour an individual ought to keep away from excessive usage of smartphones that may improve sleep quality as well (Ajzen, 1985).

**2.9.2. Theory of Behaviorism.** This theory depends on the learning behaviour of a person that can be controlled and changed. Smartphone addiction is a learned behaviour and happens when employees encircle themselves in the surroundings where everybody is dependent on utilizing smartphones for associating with others, that dependence makes them addicted. To make them appealing, they begin associating with individuals on social media platforms and invest the majority of their energy in utilizing a smartphone for activities not identified with their work even during working office hours and invest less time in their work. This behaviour influences their own and works life. In this way, on the off chance, it can direct individuals or make them cautious by creating understanding about the disadvantages of smartphone addiction on their wellbeing, sleep and individual work-life. They can change their practices and behaviour by rehearsing self-control (Yong, 2015).

**2.9.3. Extended Theory of Self.** The theory formulated by Belk (1988) suggests that our possessions, for instance, smartphones and cyberslacking behaviour, have ended up being crucial to how individuals work each day. Intentionally or unintentionally we consider possessions as a part of ourselves. They transform into an extension of oneself, with the objective that separating from smartphones and utilization of smartphones is not related to personal purposes will cause pressure, dissatisfaction, low self-control and surprisingly mental signs like substance addiction for some, so this condition will, in the long run, lead to smartphone addiction and cyberslacking. When a person is smartphone-dependent and addicted, lesser will be the self-control and higher will be cyberslacking conduct bringing about poor sleep quality.

**2.9.4. Self-Control Theory.** The self-control theory stated by Gottfredson and Hirschi (1990), is a theory that clarifies how the absence of self-control is considered as a significant factor behind deviant behaviour. Because of this theory, deviant behaviour is an outflow of low self-control. Thus, people with low self-control will in general take part in deviant conduct because such demonstrations bring about the prompt satisfaction of their urges. Also, individuals with low self-control will in general need steadiness and their inclusion in deviant behaviour focus on their tendency for instant and inability to concede joy. It may be contended that people will in general participate in deviant behaviour, for example, cyberslacking to look for pleasure since it is a simple demonstration and basic method for fulfilling one's longings. Vazsonyi and Belliston (2007) tracked down that self-control is a more significant indicator of deviant behaviour. People with low self-control when shows the high degree of deviant behavior (cyberslacking) and also has the smartphone addiction may disturb his/her sleep because of the raises that emitts from gadgets.

A few researchers have shown that quality or trait future direction was decidedly connected with a person's self-control. People with high future direction are likely to think about future results and to defer satisfaction for the time being. The theory of delayed gratification uncovers that individuals with great delayed satisfaction would have the strong self-control capacities expected to restrain focusing on quick satisfaction (Block & Funder, 1983).

## **CHAPTER 3 METHOD**

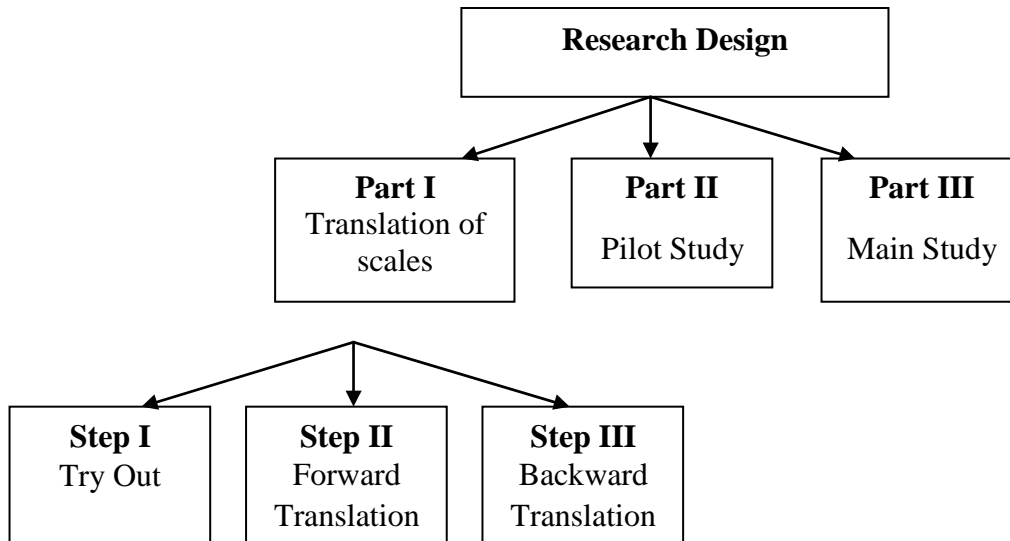
### **3.1 Introduction**

Research is a systematic and well-planned process to investigate the specific research problems and to accomplish objectives of the study. In this section, the methodological aspects of the research study are discussed. These aspects discuss the research methodology and research strategy to be used in detail. Additionally, this section includes objectives, hypotheses, measures and the description of the participant's characteristics. Procedures for data collection and analysis are also discussed.

### **3.2 Research Design**

The research design is intended to give a suitable framework for a research. An extremely critical decision in research design is the decision to be made with respect to research approach since it decides how relevant information for a research will be acquired; nonetheless, the research design process includes many interrelated decisions (Kassu, 2019). For present study, cross-sectional research design was used. Self-report questionnaires were used to gather the data and to see the relationship between variables.

The study was carried out in three parts, Part-I focused on translation of Smartphone Addiction Scale-Short Version (Kwon et al, 2013) and Cyberslacking Scale (Akbulut et al., 2016). Part-II was carried out for pilot testing, and Part-III was the main study.



### **Part-I: Translation of Smartphone Addiction Scale-Short Version and Cyberslacking Scale**

Part I focused on translation of the scales but if only after try out phase respondents reported some ambiguity in understanding the content of measures as not all the employees are equally literate. So in order to keep them at ease while responding to questionnaires, it was decided to get feedback from representative sample and in case of difficulty in comprehending the content then required scales will be translated in Urdu.

#### ***Step 1: Tryout Phase***

Before the translation process, tryout phase with original Smartphone Addiction Scale- Short Version (Kwon et al., 2013) and Cyberslacking Scale (Akbulut et al., 2016) was conducted for the identification of difficult items, words or sentences so that during the translation process those difficult words will be kept under consideration.

#### ***Step-II: Forward Translation***

Forward translation was conducted to convert source language (English) text into target language (Urdu) text. It was conducted by giving the original English version of SAS-SV



(Kwon et al., 2013) and Cyberslacking Scale (Akbulut et al., 2016) to bilinguals for translation.

### ***Step III: Backward Translation***

Back translation was conducted to convert target language (Urdu) into source language (English) to check the equivalence of the content in both languages. It was done by giving the Urdu version of SAS-SV (Kwon et al., 2013) and Cyberslacking Scale (Akbulut et al., 2016) to those bilinguals who were not aware of original version of scales.

### **Part-II: Pilot Study**

The pilot study was conducted to check the cultural appropriateness, relationship between variables and ease of understanding of instruments by participants. It was conducted to figure out any kind of ambiguity or error in instrument and responses.

### **Part-III: Main study**

After successful completion of Part-I and Part-II, the Part-III of the research was initiated that is main study which was carried out to meet objectives of the study and to test the formulated hypotheses. Furthermore it was aimed to explore the mediating role of self-control and role of gender as a moderator between study variables.

## **3.3 Instruments**

Following measures were used along with the demographic sheet comprising of information pertinent to present research such as age, gender, level of education, job status, organization name, duration of smartphone usage and sleep duration.

### **3.3.1. The Smartphone Addiction Scale-Short Version (SAS-SV)**

The scale was developed by Kwon et al.(2013) to measure the smartphone addiction. This scale is a 10 item shortened version of the original 40 items scale with responses ranging

from “strongly disagree” 1 to “strongly agree” 6 (Appendix B). The total score ranges from 10 to 60, with the highest score indicating the maximum existence of “smartphone addiction”. The original SAS-SV showed content and concurrent validity and internal consistency (Cronbach’s alpha: 0.91). Smartphone addiction Scale-Short Version provides cut-off values of  $\geq 31$  for women and  $\geq 33$  for men participants, as suggested by Kwon Min. There are no items with reverse scoring. (Kwon et al., 2013). Urdu version of the scale was used in the present study which was translated by the researcher of the current study. The cronbach alpha reliability of urdu translated version of the scale is 0.84 (Appendix C).

### **3.3.2. The Cyberslacking Scale**

Cyberslacking scale in this study is the translated version of a cyber slacking scale developed by Akbulut et al. (2016). It is 30-items instrument used to measure 5 cyberslacking indicators: sharing, shopping, real time updating, accessing online content and gaming or gambling. The answers range from “Never to Great Extent”. Cronbach alpha coefficient of cyberslacking scale is 0.92 (Appendix E). Urdu version of the scale translated by present researcher was used for current study. The cronbach alpha reliability of urdu translated version of the scale is 0.93 (Appendix F).

### **3.3.3. The Pittsburgh Sleep Quality Index (PSQI)**

Sleep quality was assessed by using Pittsburgh Sleep Quality Index (PSQI). The PSQI is a standardized quantitative measure of sleep quality with demonstrated high levels of consistency, reliability, and validity (Buysse et al., 1989). It consists of 19 self-reported questions grouped into seven component scores. The seven components are scored using the following the algorithm proposed by Buysse et al. (1989). Each component score is weighted

equally on a 0-3 scale with lower scores indicating no problem and higher scores indicating a progressively worsening problem as follows: (i) subjective sleep quality (very good to very bad), (ii) sleep latency (<15 minutes to >60 minutes), (iii) sleep duration (>7 hours to <5 hours), (iv) sleep efficiency (>85% to <65% hours sleep/hours in bed), (v) sleep disturbances (not during the past month to >3 times per week), (vi) use of sleeping medications (none to >3 times a week), and (vii) daytime dysfunction (not a problem to a very big problem). For clinical use, the authors proposed a cut-off score of < 5 to indicate good quality sleep and >5 to indicate poor sleep quality (Buysse et al., 1989). Cronbach alpha coefficient of cyberslacking scale is 0.83 (Appendix H). Urdu version of the scale was used in the current study (Firdaus et al, 2020). The cronbach alpha reliability of urdu translated version of the scale is 0.81 (Appendix I).

### **3.3.4. Brief Self Control Scale**

Brief Self-Control Scale was developed by Tangney et al. (2004) to measure the general self- control. It is a 13-item instrument with 5-point Likert scale with response options varying from (just like me) to (not at all like me). Internal consistency estimates “alpha” were (0.83 and 0.85) in the two study samples. Test-retest reliability (three week interval) estimate was 0.87 (Tangney et al., 2004) (Appendix K). In present research Urdu translated version (Kausar & Zafar, 2014) of the scale was used. The cronbach alpha reliability of urdu translated version of the scale is 0.79 (Appendix L).

### 3.4 Verification of tools

#### **Part-I :Translation of Smartphone Addiction Scale-Short Version and Cyberslacking**

##### **Scale**

Part-I aims for translation of Smartphone Addiction Scale-Short Version i.e. SAS-SV (Kwon et al., 2013) and Cyberslacking Scale (Akbulut et al., 2016). Translation was completed in following three steps:

**Step-I:** Try out phase

**Step-II:** Forward Translation

**Step-III:** Backward translation

##### **Step I: Try out**

Before the translation process, tryout phase of original Smartphone Addiction Scale-Short Version (Kwon et al., 2013) and Cyberslacking scale (Akbulut et al., 2016) was conducted for the identification of difficult items, words or phrases so that during the translation process those difficult words will be kept under consideration. The sample comprised of 10 employees of University of Lahore Islamabad campus and Capital Development Authority (CDA) Islamabad, they were of different ages that ranges from 20 years and above. Feedback from both private and government sector was obtained.

##### **Procedure and outcomes of tryout**

Those participants who were volunteered to be part of tryout phase were contacted by the researcher. They were told about the nature of the study and then tryout process. The employees were asked to read each item of original Smartphone Addiction Scale-Short Version Scale

(Kwon et al., 2013) and Cyberslacking Scale (Akbulut et al., 2016) carefully and were also instructed to highlight any ambiguity in content, difficulty in understanding the content and cultural appropriateness. As per their feedback some words or sentences were difficult to comprehend and more suitable, easy and appropriate expression should be used in place of the existing one. It was decided on the basis of their response that for current study scales will be translated in Urdu.

## **Step II: Forward translation**

In Step-II, forward translation was carried out to convert source language (English) text into target language (Urdu) text.

### **Procedure**

Forward translation was carried out by giving the original English versions of Smartphone Addiction Scale-Short Version (Kwon et al., 2013) and Cyberslacking Scale (Akbulut et al., 2016) to three bilingual qualified members of different fields (such as M.Phil in English and M.Phil in Urdu). The professionals were selected on the basis of having excellent command on both source (English) and target (Urdu) languages. Three bilingual experts were asked to translate the scales in Urdu Language and to go through the original questionnaires which were in English Language. They were requested to translate the items of questionnaires in simple, clear, concise and parsimonious way so that Urdu version of the scale should be according to cultural norms and values, and convey the same meaning as original version of the scale does. They were also requested to avoid using difficult, technical terms or idioms because the purpose of translation is to facilitate the reader for understanding of current study measures. After getting the translations from those experts the committee approach was conducted.

***Committee Approach.*** A Committee comprising of threemembers, one subject expert (Ph.D Psychology), present researcher and an M.Phil scholar critically reviewed the translations of respective scales and selected the most suitable and culturally appropriate ones.

### **Step-III: Backward translation**

For backward translation Urdu translated version of scales were given to three other bilinguals who were not familiar with original version of the scales and were asked to translate them back into English. Back translation was conducted to convert target language (Urdu) into source language (English).

#### **Procedure**

Backward translation was done by giving the Urdu version of Smartphone Addiction Scale-Short Version (Kwon et al., 2013) and Cyberslacking Scale (Akbulut et al, 2016) to three bilinguals for English translation of the respective scales. As they were expert in both English and Urdu languages they were all qualified and had done M.Phil in English. They were asked to read every item of the Urdu version carefully and write English translation of every item in a very simple, clear, parsimonious, unambiguous way that conveys the same meaning and retains the essence of translated version. Once translation was done it was again analyzed by acommittee.

***Committee Approach.*** Another committee approach was conducted with an expert (PhD. Psychology) and the researcher herself. They both critically evaluated the back translated items of English version of the scales and chose the most suitable ones for comparison with the original Englishversion.

On the completion of translation process the back translation of measures was sent to authors for approval. With the consent of the author translated version was used in present research for data collection(Appendix D & G).

## **Part-II: Pilot study**

A pilot study is considered as the process of pre-testing or "trying out" of a study with small sample. One of the benefits of leading a pilot study is that it may give guidance ahead of time about where the main research study could go wrong and fail, where research conventions may not be followed, or whether proposed techniques or instruments are improper or excessively complex (Teijlingen, 2002).

For present study pilot testing was justified as all four scales likely to be used in this study (i.e., SAS-SV; PSQI; Cyberslacking Scale, and BSCS) were originally developed in English language and English being a second language is not easily understood by everyone, so there was a need of Urdu translation of the respective scales which was also supported in tryoutphase. Moreover it was carried out to have understanding about intricacy of relationship between variables.

## **Objectives**

Pilot study was carried with the following objectives:

1. To determine the psychometric characteristics of all the measures.
2. To explore the pattern of relationship between study variables.

## **Sample**

Pilot study was carried out with sample of 100 employees (50 Men &50 Women). Age

ranges from 20 and above years ( $M= 2.04$   $SD= 0.88$ ). Data was collected from different private and public sector organizations, institutions, banks and telecommunication companies of Islamabad and Rawalpindi such as Capital Development Authority (CDA), National Bank of Pakistan (NBP), Interior Ministry, Islamabad College For Girls (ICG), Pharmaceutical Company, University of Lahore (UOL) Islamabad campus, Maroof International Hospital, SLS School, Mobilink, The Thinking School etc.

## **Procedure**

Data was gathered through convenient sampling technique. First of all, authorities were contacted in order to seek permission about data collection. After the consent, participants were approached and procedure of data collection was held. It was led by administering questionnaires to the participants. They were handed over a set of questionnaires with a demographic information sheet and informed consent. The procedure of this research was affirmed by Institutional Review Board of Department (Appendix N).

## **Results**

To accomplish the objectives of the pilot study following statistical analysis such as descriptive statistics, alpha reliability coefficient and inter-scale correlation were performed through SPSS (Statistical Package for Social sciences) Version 21. Results are given below:



**Table 1***Frequencies and Percentages of Demographic Characteristics of the Participants (N=100)*

Variables	F	%
Age		
20-35	54	53.8
31-50	38	37.9
51-above	8	7.9
Gender		
Males	50	47.6
Females	50	47.6
Education Level		
Intermediate and below	14	13.8
Bachelors	29	28.7
Masters and above	57	56.9
Job Position		
Lower grade	51	48.6
Higher Grade	49	46.7
Job Sector		
Private	59	56.2
Government	41	39
Smartphone usage		
0-3 hours	2	1.9
4-7 hours	26	24.8
8-11 hours	70	66.7
>11 hours	2	1.9
Sleep Duration		
4-6 hours	32	30.5
7-9 hours	68	64.8

Note. f= Frequency; %= Percentage

Table 1 shows the demographic variables of current study. This frequency table shows the percentage of sample consists of 50% men and 50% women along with the percentages of different education levels i.e. intermediate and below, bachelors, masters and above out of them 48.6% employees were included in lower grade job position and 46.7% were included in higher grade job position. The sample was taken from two job sectors i.e. Private sector and

Government sector. Smartphone usage duration varies among all employees that has a range from 0-3 hours, 4-7 hours, 8-11 hours and >11 hours. Similarly, all employees lie in only the two categories of sleep duration range i.e. 4-6 hours and 7-9 hours. None of the employees have reported having less than 3 hours sleep or above 10 hours sleep.

**Table 2**  
*Psychometric Properties of Scales (N=100)*

Scales	No of items	$\alpha$	$M$	$SD$	Range		Skewness		Kurtosis	
					Actual	Potential	Statistic	Std. Error	Statistic	Std. Error
SAS-SV	10	.84	38.71	10.15	19-57	10-60	.028	.241	-1.07	.478
CSS	30	.93	92.65	21.86	56-139	30-150	.779	.241	-.423	.478
PSQI	19	.81	7.62	3.76	1-15	0-30	.292	.241	-.952	.478
BSCS	13	.79	40.19	5.94	23-55	10-50	-.130	.241	.042	.478

Note. SAS-SV= Smartphone Addiction Scale-Short Version; CSS= Cyberslacking Scale;PSQI= Pittsburg Sleep Quality Index; BSCS= Brief Self Control Scale

Table 2 shows the psychometric properties of the scales including reliability and all descriptive statistics. Cronbach's Alpha Reliability for the scale SAS-SV, CSS, PSQI and BSCS was determined. Reliability analysis show that all scales have strong reliability which is according to the criteria of Cronbach Alpha reliability which is that it should be greater than 0.7. So the values of alpha have shown that the scales are reliable for the current study. Furthermore this table also shows the Mean, Standard Deviation and Ranges of all the scales. Skewness and Kurtosis were also determined to check the normality of the constructs and its items and the range should be -2 to +2,

so the values in table show the normal distribution.

**Table 3**

*Inter Scale Correlation Between PSQI, CSS, SAS-SV and BSCS (N=100)*

Scales	1	2	3	4
1 SAS-SV	-	.72**	.46**	-.29*
2 CSS		-	.55**	-.25*
3 PSQI			-	-.14*
4 BSCS				-

Note. SAS-SV= Smartphone Addiction Scale- Short Version; CSS= Cyberslacking Scale; PSQI= Pittsburg Sleep Quality Index; BSCS= Brief Self Control Scale

\*\* $p < 0.01$ , \*  $p < 0.05$

Table 3 shows the correlation among four respective scales i.e. SAS-SV, CSS, PSQI and BSCS. It shows that smartphone addiction has significant positive correlation with CSS ( $p < .01$ ) and PSQI ( $p < .01$ ) but significant negative correlation with BSCS ( $p < .05$ ). CSS shows the significant positive correlation with PSQI ( $p < .01$ ) and significant negative correlation with BSCS ( $p < .05$ ). PSQI shows the significant negative correlation with BSCS ( $p < .01$ ).

### 3.4.1 Discussion

Current study was planned to explore smartphone addiction, cyberslacking, sleep quality and self-control among employees. Though smartphone is significant in our lives now yet alongside positivity when individual gets dependent on it then it adds to negative factors also that might be

considered as hurtful and dangerous that can cause behavioral issues, for example, cyberslacking (Hussain et al., 2019). When smartphone addiction increases and self-control decreases it eventually leads to cyberslacking and bright light emission of smartphones and its excessive usage all the time even in workplace additionally impacts sleep quality. In Pakistan the issue is gradually progressing so it needs to be addressed. One previous study revealed that due to advancement in technology in the media transmission world, functionality of smartphone and its usefulness and moment a single tick admittance to messages, and generally famous programs and video mediums have expanded mental unsteadiness. It makes the person so much involved in the smartphone services that they don't even realize the progression of time and remain reliant upon the internet and smartphones. The propensity to feel bothered and uncomfortable without their smartphones and become too low and dull are the qualities of persons' dependence and excessive attachment to the smartphones. This is likewise viewed as a presence of side effects of inadequate and deficient self-control over deliberate, intentional and intended tasks as self-control has been characterized as a person's psychological ability to adjust, alter, change, or supersede their motivations, wants, and constant reactions so more of the usage of smartphones that causes addiction, lesser will be the self control (Ding et al., 2021).

The aim of the current part of this research (i.e. pilot study) is to determine the psychometric properties of scales and relationship pattern among study variables. Table 1 shows the descriptive properties of demographic variables that were included in the current study which represents the basic and important features of the data and summarizes the large data of the research into one summary table. This table shows the age, gender, education, job position, job sector, time spent on smartphone and sleep duration with respective frequency and percentage values.

Table 2 shows the reliability and psychometric properties of the respective scales i.e. Smartphone Addiction Scale Short Version "SAS-SV" (Kwon et al., 2013), Cyberslacking Scale

“CSS” (Akbulut et al., 2016), Pittsburgh Sleep Quality Index “PSQI” (Buysse, 1989) and Brief Self Control Scale “BSCS” (Tangney et al., 2004). In current part of the research reliability analysis showed that all scales have strong reliability which is as indicated by the rules of Cronbach alpha reliability, which is that it ought to be greater than 0.7 so it was revealed that the scales are reliable and can be used for further study. Furthermore the values of skewness and kurtosis show the normality of the data distribution.

Table 3 shows the correlation among study variables/scales. Sleep quality shows the significant positive correlation with smartphone addiction. According to the findings when smartphone addiction will increase then sleep quality will be poor and vice versa. One past research uncovered the connection between smartphone addiction and sleep quality. It concluded that excessive use of smartphones and social networks could weaken sleep quality (Absari et al., 2016). So according to the findings of pilot study, when smartphone addiction increases sleep quality will be poor.

Moreover, significant positive correlation was found between sleep quality and cyberslacking indicating that when person is more into cyberslacking behavior, that habit and behavior will adversely effect sleep quality. One past research demonstrated the connection among cyberslacking and sleep quality by expressing that when the individual uses smartphones and internet for individual reasons at work environment he/she become dependent and couldn't satisfy the work prerequisites which later on upsets him and impacts the sleep quality (Demsy, 2019). Another research demonstrated that the problematic utilization of smartphones and internet constantly even at work environment may impact sleep antagonistically and the bright light of the smartphone may create problem in falling asleep (Carter et al., 2021). Findings (Table 3) also revealed that sleep quality had significant negative correlation with self control. Past research supported that people with poor sleep quality may act abruptly to adapt to the related negative mood or emotions, presenting low level of

self-control (Liu et al., 2020).

Result (Table 3) also indicated that cyberslacking has significant positive relation with smartphone addiction. One research uncovered that the excessive and uncontrolled utilization of smartphone at work for individual reason during working hours influences the profitability of people as well as delays work assignments and broadens cyberslacking behavior (Attique, 2018). Cyberslacking has significant negative correlation with self control which was supported by Gottfredson's theory that suggested individual's behavior problems (e.g. cyberslacking) are induced through a lack of self-control (Gottfredson & Hirschi, 1990).

Futhermore findings also showed that smartphone addiction has significant negative correlation with self control. These findings are in the line to previous research indicating that self-control is inversely related to smartphone addiction because when person has low self-control than person will be more indulge into the usage of smartphone and level of smartphone addiction increases (Cho et al., 2017).

Item total correlation was also calculated in the present study. Item total correlation of Smartphone Addiction Scale-Short Version shows that all items of the scale are positively correlated with the total of the scale. It means that the scale has the good internal consistency with minimum 0.52 to maximum 0.68 range. Item total correlation of Cyberslacking Scale shows that all items of the scale are positively correlated with the total of the scale. It means that the scale has the good internal consistency with minimum 0.32 to maximum 0.87 range. Pittsburgh Sleep Quality Index shows the item total correlation within the range from 0.40 to 0.88, the items of the scale are positively correlated with the total of the scale. Item total correlation of Brief Self-Control Scale shows that every item of the scale has positive correlation with total score of the scale within the range from 0.32 to 0.63. It was revealed that all the scales i.e. SAS-SV, CSS, PSQI and BSCS has

good internal consistency and every item of each scale contributes to the respective constructs.

Overall pilot study proved to be useful and offered insight into relationship between variables and further supported the use of measures for main study.

### **Part III: Main study**

Main study was carried out to explore the relationship among study variables and to examine the gender difference, and mean differences of sample across different demographic variables, mediating role of self-control and moderating role of gender in relationship of smartphone addiction, cyberslacking and sleep quality.

### **Objectives**

The study intends to meet the following objectives:

1. To investigate the predictive relationship of smartphone addiction with cyberslacking and sleep quality.
2. To investigate the mediating role of self control between study variables.
3. To investigate the moderating role of gender between study variables.
4. To explore gender differences in study variables.
5. To investigate the mean difference across private and government sector employees, different age groups and education levels of participants on study variables.

### **3.5 Study Design**

The research was a Cross-sectional Correlational designed in order to explore the relationship between smartphone addiction, cyberslacking, sleep quality and self-control among employees. It

has been designed in such a manner that mediating role of self-control and moderating role of gender on the relationship between study variables can also be explored

### 3.6 Population

Population targeted for the main study was Private and Government sector employees. The sample for the main study consisted of 300 participants including 150 men and 150 women, age ranges from 20 and above ( $M= 1.68$ ,  $SD= .68$ ). According to Tabachnick and Fidell (1996) the sample size of 300 is good for the current study analysis (Morgan & Vorrhis, 2007). To find relationship between variables sample size should not be less than 50 and to check the predictors (regression) sample should not be less than 104 (Green, 1991). According to this rule, current study meets the need of accurate sample size ( $N=300$ ). The target population of this study was employees with different education levels (i.e. intermediate and below, bachelors, masters and above) ( $M=2.60$ ,  $SD= .62$ ). Data was gathered and collected from different private and public sector organizations, institutions, banks and telecommunication companies of Islamabad and Rawalpindi such as Capital Development Authority (CDA), National Bank of Pakistan (NBP), Interior Ministry, Islamabad College For Girls (ICG), Pharmaceutical Company, University of Lahore (UOL) Islamabad campus, Maroof International Hospital, SLS School, Mobilink Company, Telenor Company, Health Ministry, Smart Brain Institute, Sky Electric Company, National Accountability Bureau (NAB), Gov. Post Graduate College Rawalpindi, Convent School Islamabad, Bahria University Islamabad, and The Thinking School Islamabad etc. Data was collected from employees holding different job positions that is managers, CEO, professors, assistants, assistant managers, UDC, LDC, clerics, teachers, stenographers, accountants, computer operators, lawyers, telephone operators, receptionists, trainers, head trainers, coordinators, engineers etc.

#### Table 4



*Frequencies and Percentages of Demographic Characteristics of the Participants (N=300)*

Variables	F	%
Age		
20-35	151	50.3
31-50	116	38.7
51-above	33	11.0
Gender		
Males	150	50
Females	150	50
EducationLevel		
Intermediate and below	21	7
Bachelors	78	26
Masters and above	201	67
Job Position		
Lower grade	151	50.3
Higher Grade	149	49.7
Job Sector		
Private	170	56.7
Government	130	43.3

Note. f= Frequencies; %= Percentages

Table 8 shows the demographic variables of current study. This frequency table shows the percentage of sample with different demographic characteristics such as age, gender, education level, job position and job sector.

### **Procedure**

As the current study was conducted in Covid-19 situation so the data was collected via online and in person, in a way that with consent of administrators in relevant organizations. Firstly, the online link of questionnaires (google forms) were sent to the required sample on which all the information regarding the purpose of the study was given. Before filling the questionnaires the participants registered themselves that required some basic information i.e. gender, age, education, smartphone usage duration, sleep duration, organization name. Revealing their identity in any form was not mandatory, it was totally upto them either they want to reveal themselves or to remain

anonymous. Questionnaires related smartphone addiction, cyberslacking, sleep quality and self-control were appeared (online) and given (in person) to the participants one by one. After the completion of the questionnaires, participants submit their responses which automatically saved on the research email account. Thanks note that was generated by the researcher was automatically appeared to the participants in order to acknowledge and appreciate their active participation. For the purpose of in person data collection firstly the authorities of the organizations, institutions and companies were approached in order to seek permission for data collection. The main study portion includes the administration of relevant questionnaires to participants. They were briefed about the purpose behind the present research and were asked to go through the consent form and they could show their willingness to participate in the study by signing the consent form. Participants were briefed about how to respond on questionnaires and were ensured about confidentiality of responses. The participants were similarly be informed that their participation is purposeful and that they have a right to quit or withdraw from the research at anytime. The questionnaires contains 72 statements and required around 20-25 minutes to complete.

### **3.7 Sampling technique**

The sample was recruited from both government and private sector employees through convenient sampling technique.

### **3.8 Data collection**

For current study, data was collected from the employees of above mentioned public and private sector organizations, institutions, banks and telecommunication companies of Islamabad and Rawalpindi. Authorities of the organizations, institutions, bank and telecommunication company were contacted for the permission to collect the data.

The Authorities of concerned institutes and organizations were briefed about the nature

and purpose of study. In the next step participants were approached and selected through convenient sampling. They were informed about the purpose of the study. They were guaranteed that data gathered from them will only be utilized for research purpose and their identities will likewise be kept anonymous. Participants were approached to give consent prior to participate in research. They were informed that they have an option to quit from research at anytime.

The research questionnaires were handedover to participants with relevant instructions and directions. After completion of data collection procedure authorities and participants were acknowledged and thanked for their valuable time and cooperation.

### **3.9 Data Analysis**

The data was subjected to statistical analyses according to stated hypotheses. The analyses of data began with descriptive statistics and reliability analysis for all the measures used in the study. Pearson product moment correlation was carried out to explore the relationship between smartphone addiction, cyberslacking, sleep quality and self-control among employees. Independent sample t-test and multivariate analysis of variance were carried in order to explore the impact of demographic variables such as age, gender, education level, and job-sector of employees. Mediation and Moderation analysis was performed using Process Macro by Andrew Hayes in SPSS to determine the impact of self-control as a mediator and gender as a moderator on study variables. Moderated mediation was also carried out. Regression was also performed to predict the impact or value of predictor variable on outcome variable. Confirmatory factor analysis (CFA) was also calculated by using Amos for the checking of factor structure of the respective scale i.e. Cyberslacking scale.

### **3.10 Research Ethics**

Confidentiality of participants was ensured. Informed consent of all participants was taken.

They were briefed about purpose of study and they were also informed that they can quit from research at any point of time.

## **CHAPTER 4**

### **ANALYSIS AND INTERPRETATION OF DATA**

In this chapter the results of the main study are discussed in which the different analysis have been done in order to test the hypotheses and to meet the current study objectives. Analysis that have been performed were descriptive statistics, reliability, interscale correlation, t-test, manova, regression, confirmatory factor analysis (CFA) and moderated mediation.

Some exploratory analyses were also carried out to explore gender and job sector wise variations in smartphone usage, cyberslacking, sleep quality and self-control. For this bar charts are drawn to have a comparison across gender and job sector wise with reference to smartphone usage duration, sleep duration, cyberslacking and self-control. The purpose of using graph is to represent the numerous and complicated data in a very easy manner and less space. Some compound graphs are also drawn that will further elaborate how level of cyberslacking behavior and self-control increases/decreases in smartphone usage duration changes sleep quality (Figure 10 & 11)

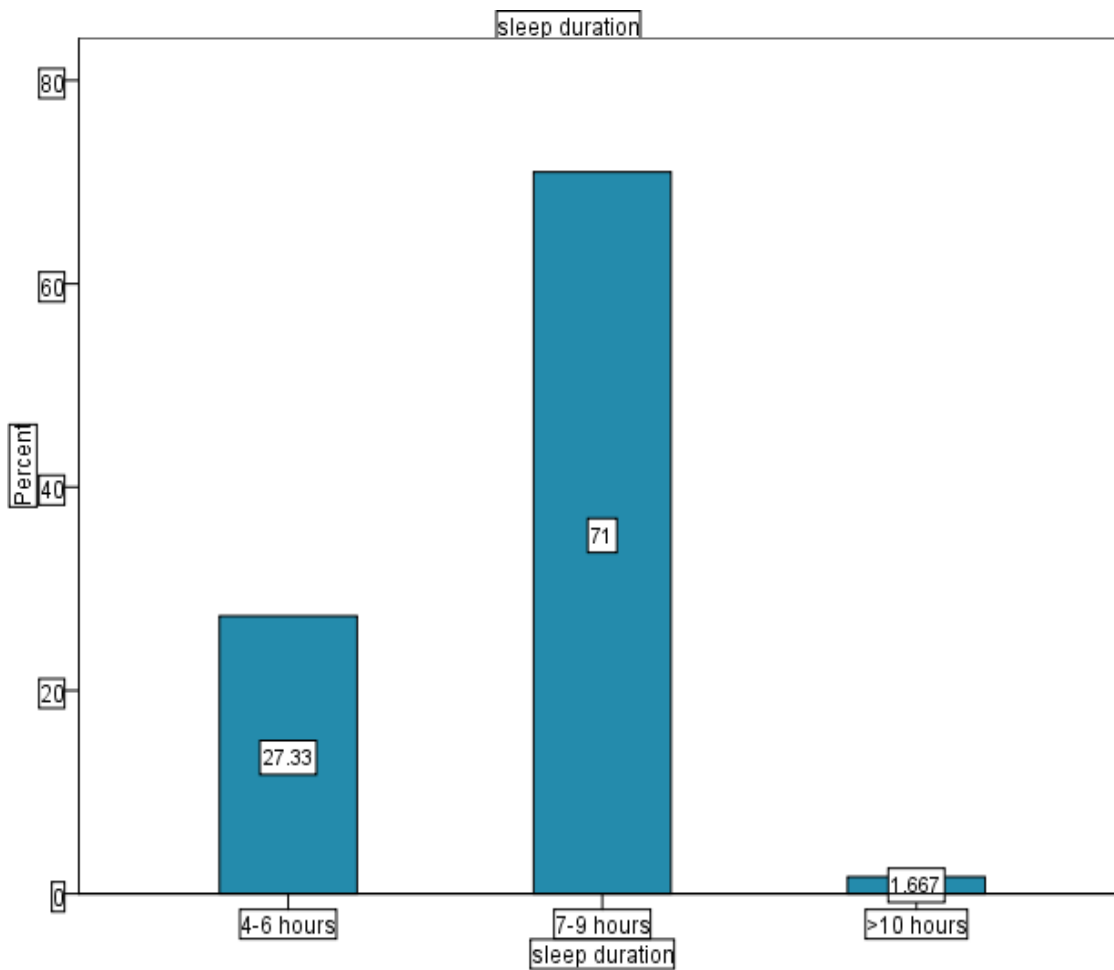


Figure 2: Frequency of sleep duration

The bar chart shows the sleep duration of employees. 71% employees have reported 7-9 hours sleep and 27.33% employees have reported 4-6 hours of sleep duration. Out of all only 1.67% employees have reported more than 10 hours of sleep. No single employee lies in the category of 1-3 hours of sleep duration.

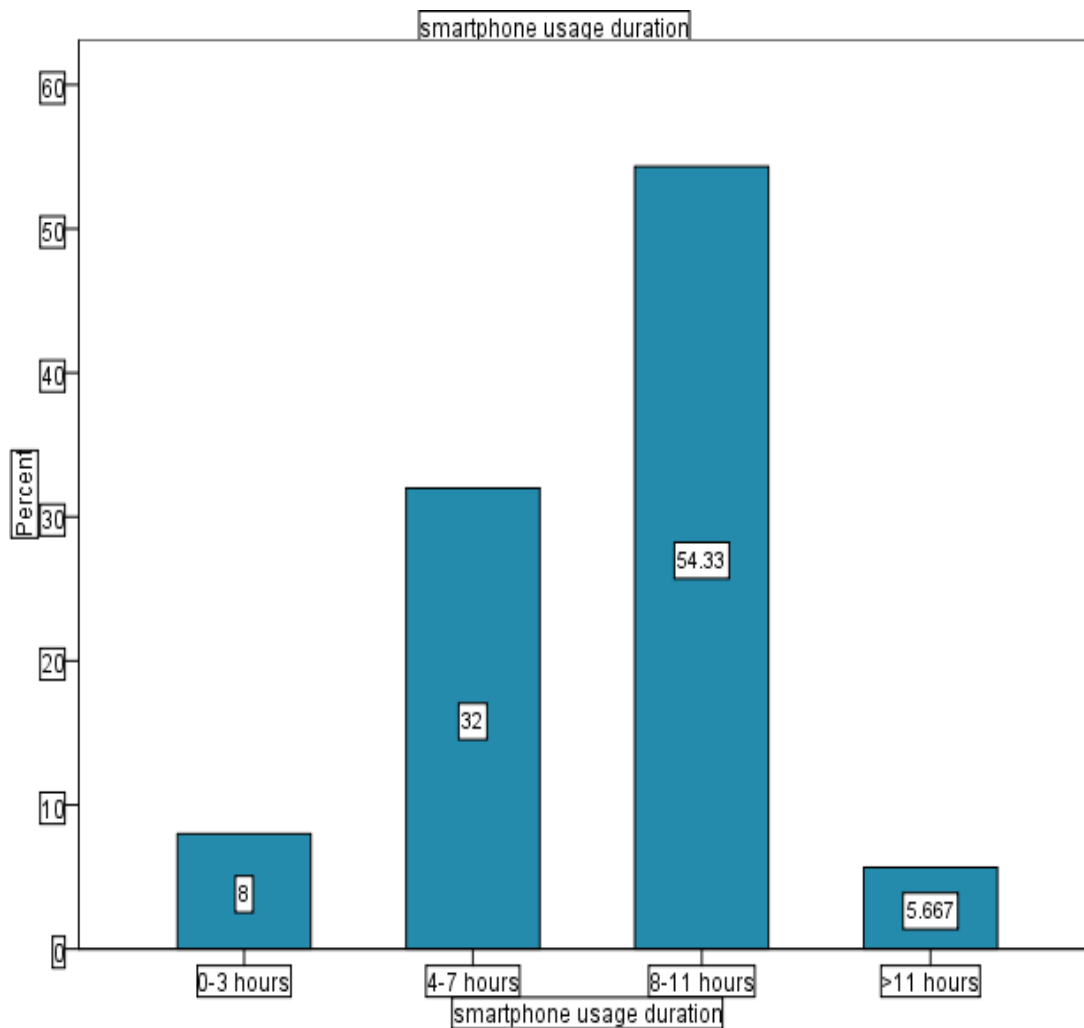


Figure 3: Frequency of smartphone usage duration

The bar chart shows the smartphone usage duration among employees. This can be observed from graph that 54% of the employees use smartphone for 8-11 hours and near to 32% employees use it for 4-7 hours. Almost 8% employees reported smartphone usage duration of less than 3 hours and 6% use it for more than 11 hours.

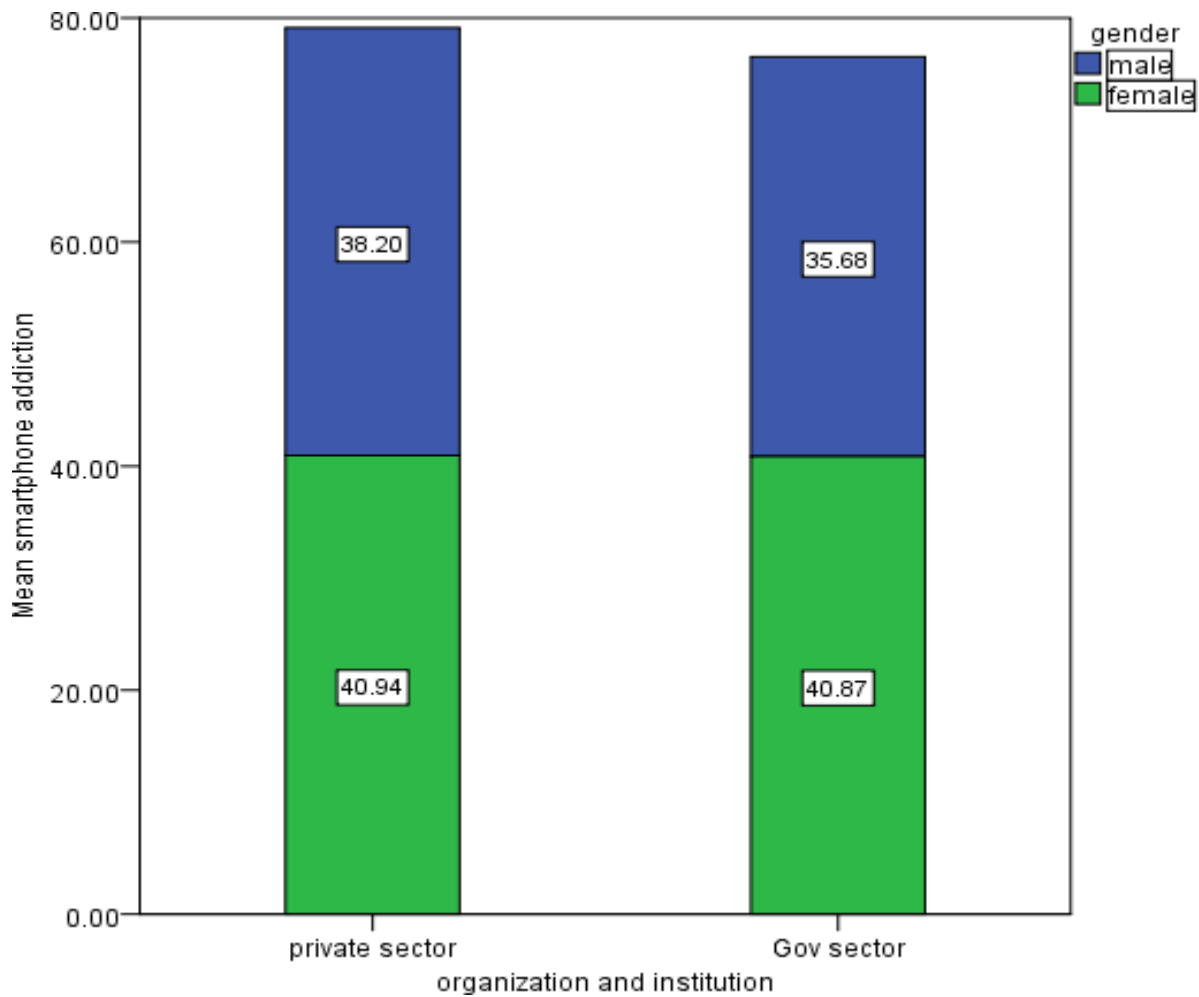


Figure 4: Gender and Job sector-wise comparison in smartphone addiction

The bar chart presents the gender wise comparison between private and government sector employees on smartphone addiction. This shows that female employees of both private and government sector scored higher on smartphone addiction as compared to male employees. Graph also demonstrated that private sector employees were more addicted than government sector employees especially the females.



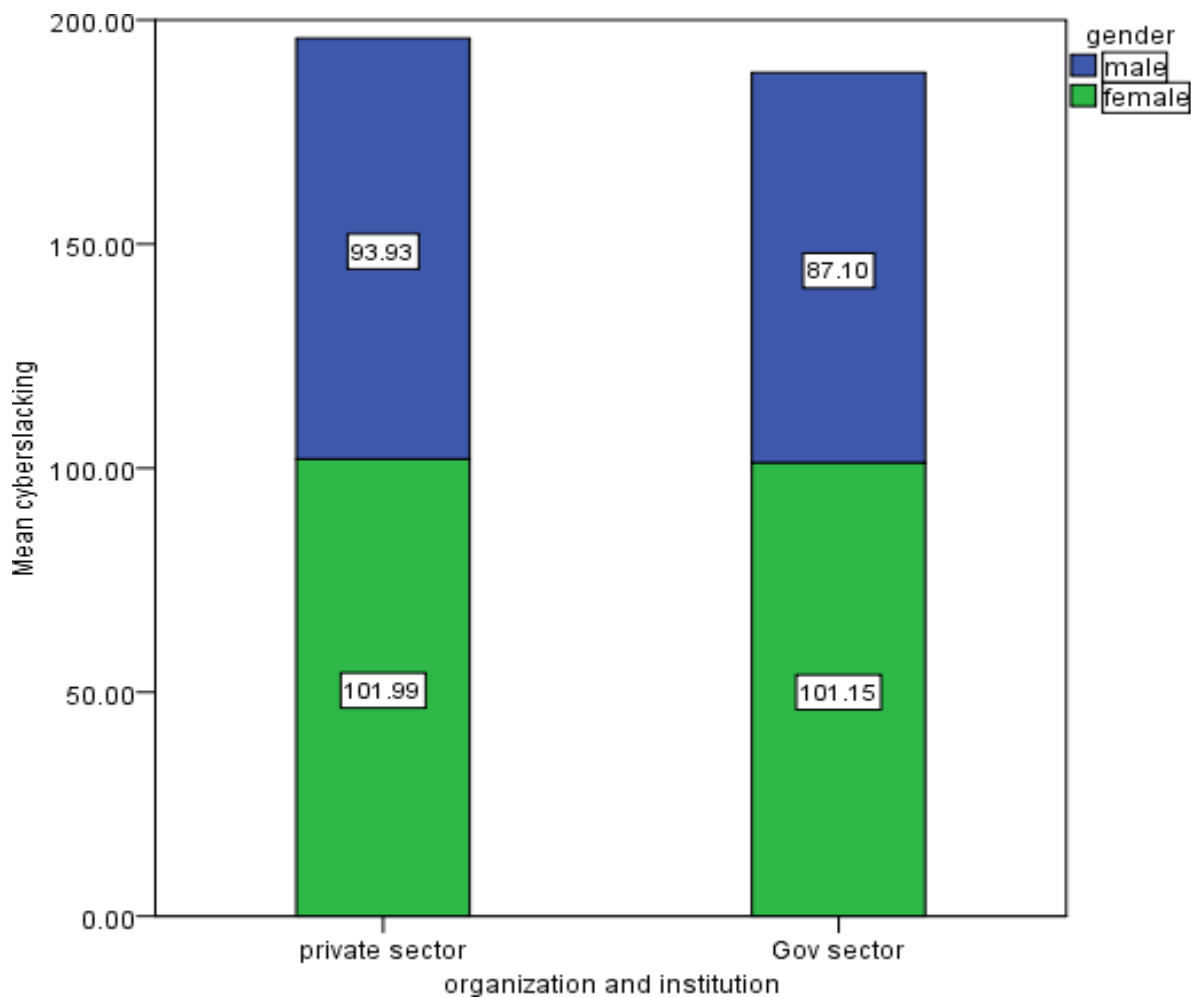


Figure 5: Gender and Job sector-wise comparison in cyberslacking

The bar chart presents the gender wise comparison between private and government sector employees on cyberslacking. This shows that female employees of both private and government sector scored higher on cyberslacking as compared to male employees. Bar chart also specified that private sector employees shows more cyberslacking behavior than government sector employees especially the females.

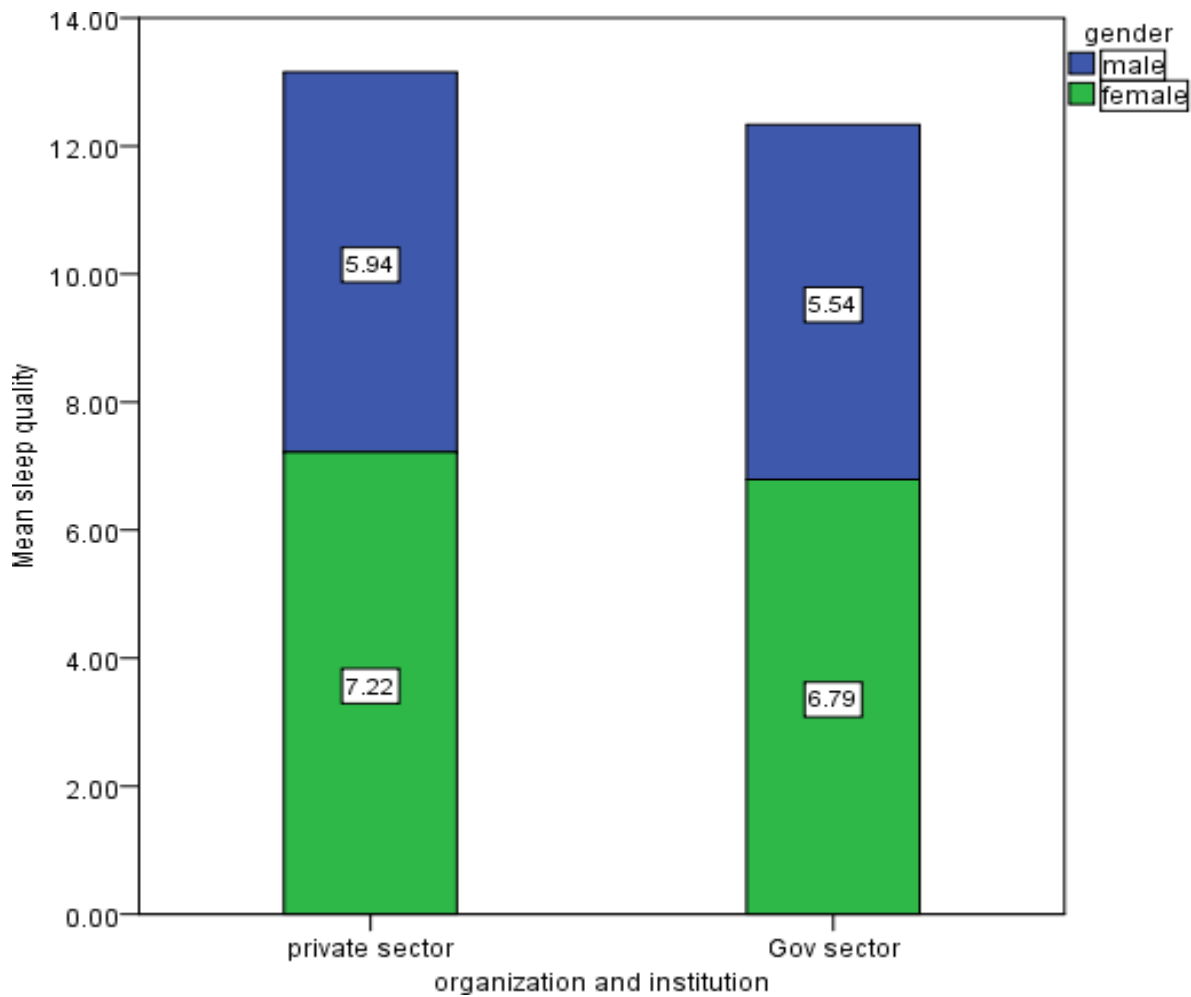


Figure 6: Gender and Job sector-wise comparison in sleep quality

The bar chart presents the gender wise comparison between private and government sector employees on poor sleep quality. This shows that female employees of both private and government sector scored higher on poor sleep quality as compared to male employees. It was also demonstrated in the bar chart that private sector employees had more poor sleep quality than government sector employees especially the females.

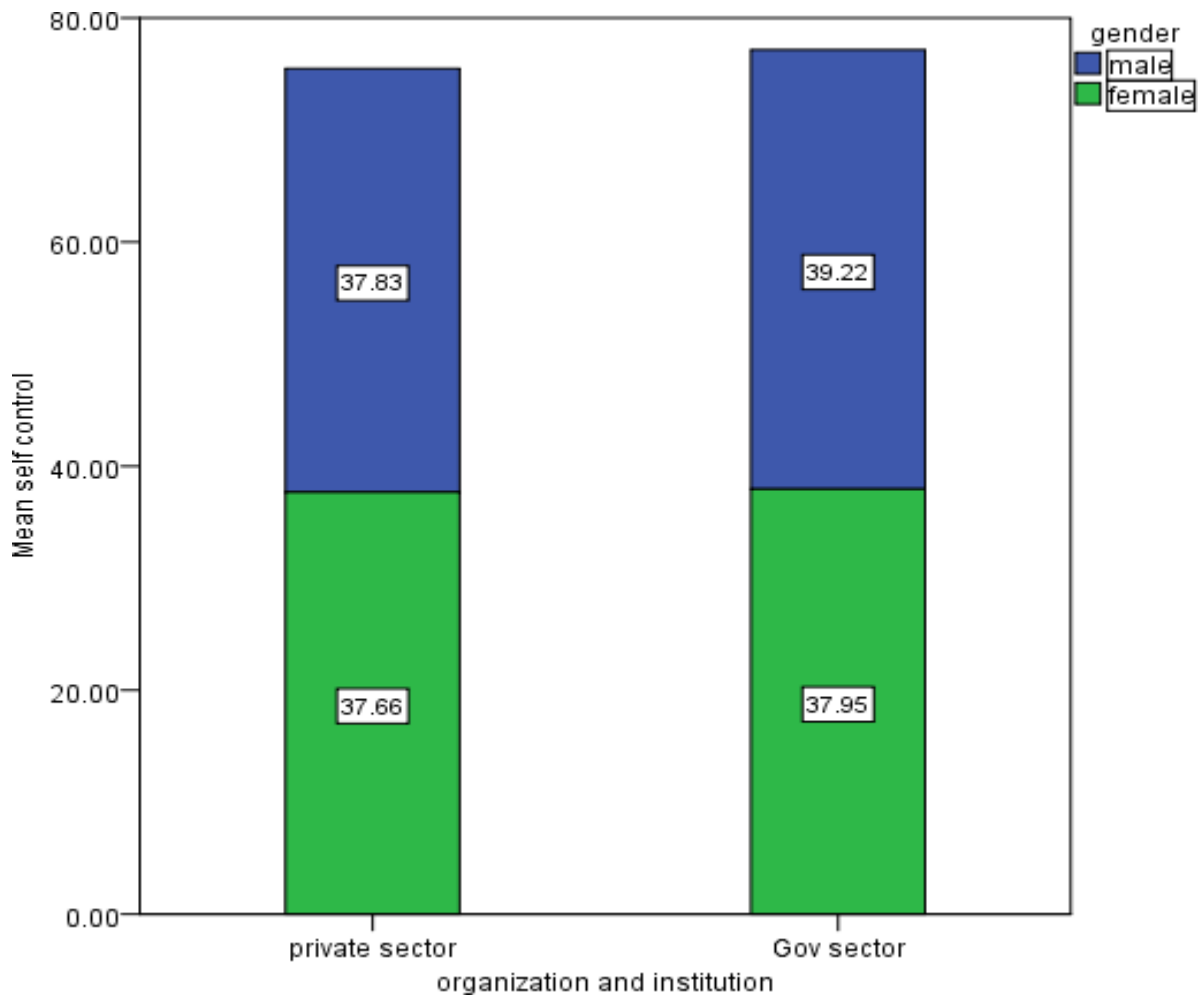


Figure 7. Gender and Job sector wise comparison in self-control

The bar chart presents the gender wise comparison between private and government sector employees on self-control. This shows that male employees of both private and government sector scored higher on self-control as compared to female employees. Bar chart also demonstrated that private sector employees scored less on self-control than government sector employees especially the females.

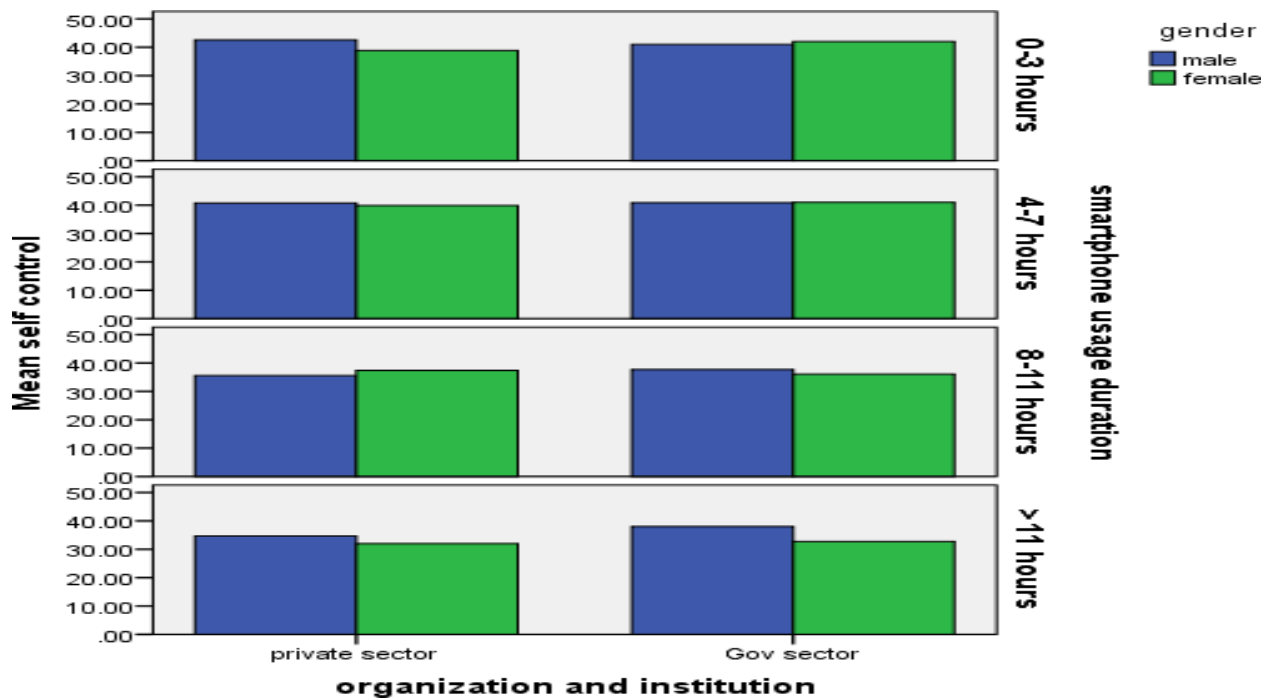


Figure 8: Gender and Job sector-wise comparison in self-control and smartphone usage

The compound graph shown in figure 8 indicated that the mean of self-control. It further illuminates job sector (private and government) wise and gender comparison. Graph revealed that when level of self-control is low smartphone usage increases. Organization wise comparison revealed slight difference in smartphone usage whereas gender wise comparison shows female employees having more smartphone usage and low self-control.

In next graph addition of sleep duration in the graph will provide more elaborated information.

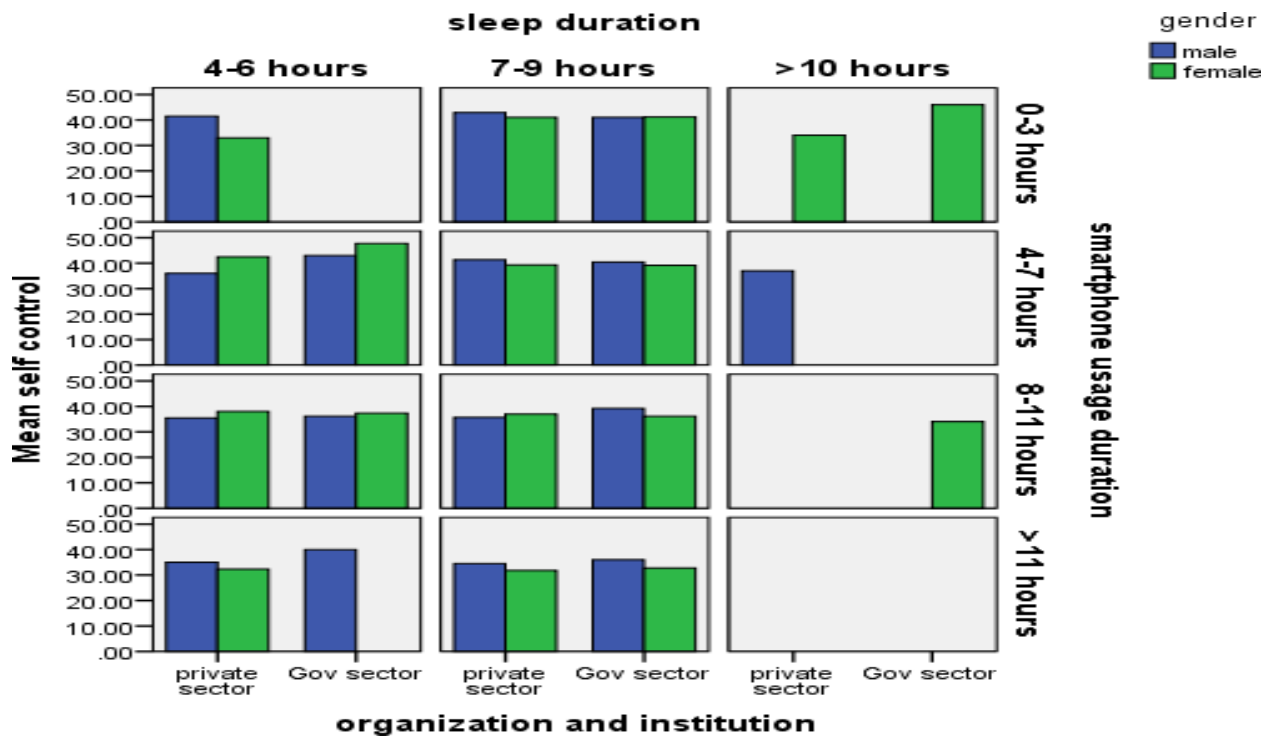


Figure 9: Gender and Job sector-wise comparison with respect to smartphone usage duration, sleep duration and self-control

The compound graph of figure 9 show the mean of self-control with reference to varied level of smartphone use and sleep duration across gender and organization. It is visible from the graph that when smartphone usage duration increases the duration of sleep becomes less meanwhile self-control also decreases. Gender wise comparison also revealed that females had more smartphone usage duration with less sleep duration and low self-control as compared to male employees. Private sector employees showed more smartphone use duration with less sleep duration and low self-control.

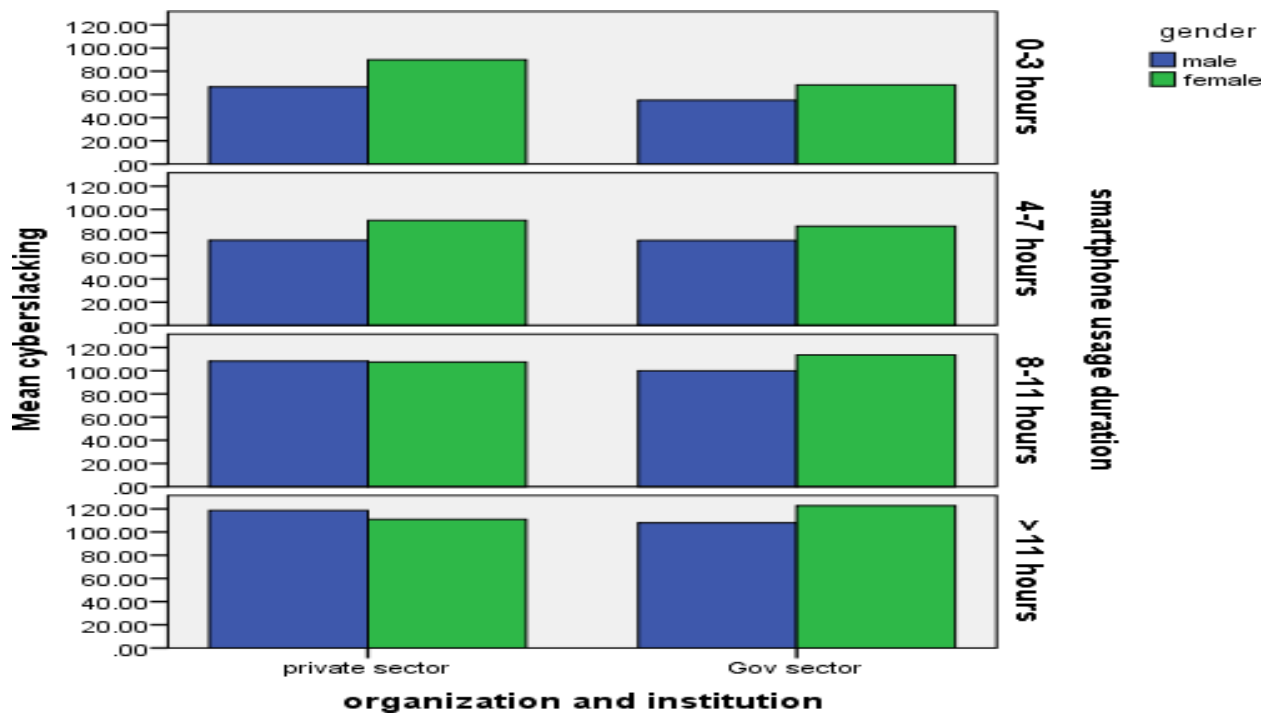


Figure 10: Gender and Job sector-wise comparison in cyberslacking and smartphone usage

The graph shows the mean of cyberslacking with reference to smartphone usage duration across gender and job sector wise comparison. Graph revealed that when smartphone usage increases the level of cyberslacking also increases. Organization and gender wise comparison revealed that private sector employees scored slightly high on smartphone usage duration especially females as compared to male employees.

The next compound graph further elaborates by adding sleep duration variable to smartphone usage and cyberslacking.

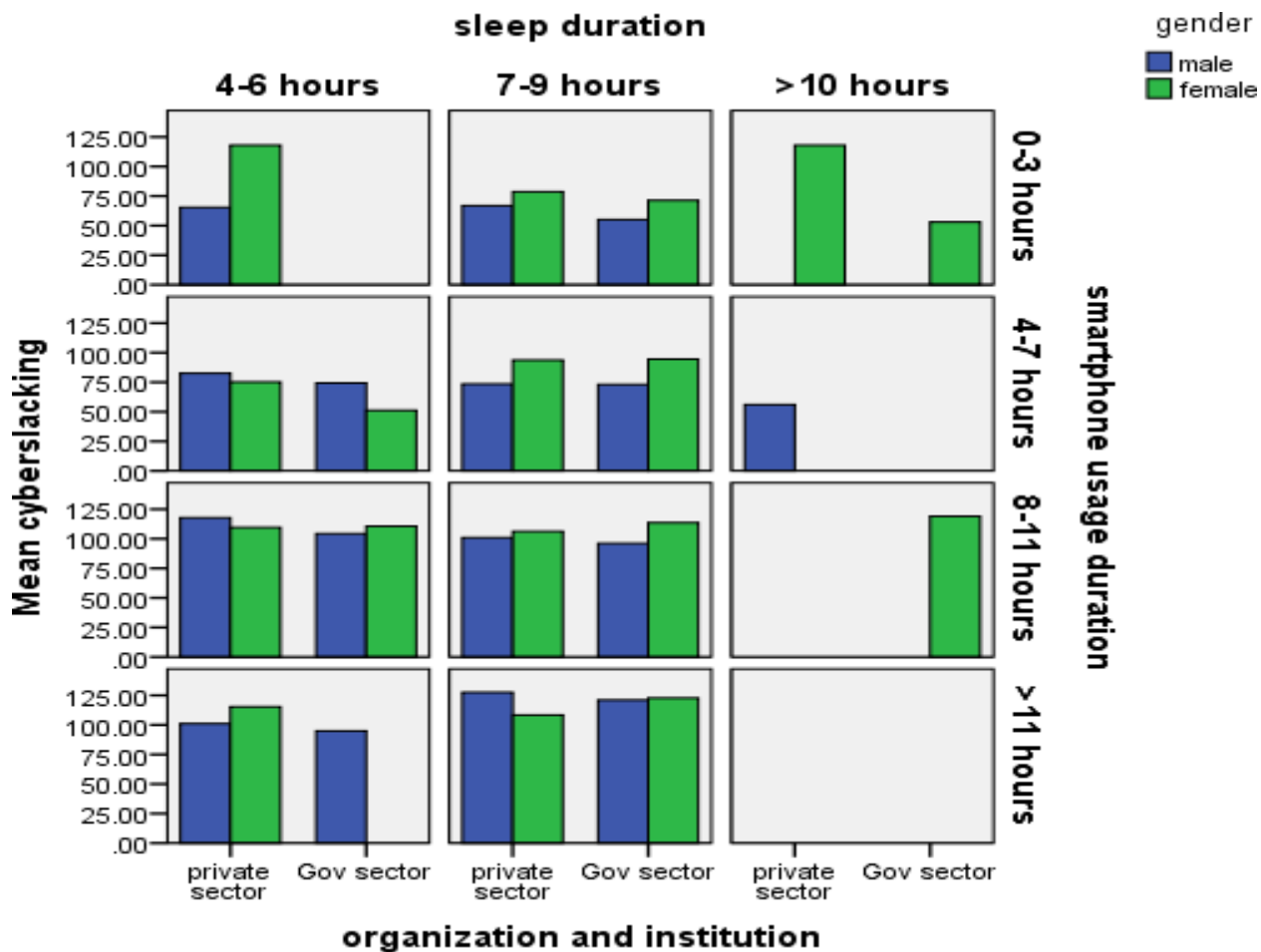


Figure 11: Gender and Job sector-wise comparison with respect to smartphone usage duration, sleep duration and cyberslacking

The compound graph in figure 11 shows the mean of cyberslacking with reference to smartphone usage duration, sleep duration across gender and organization type comparison. It is visible from the graph that when smartphone usage duration increases the duration of sleep becomes less meanwhile cyberslacking increases. Gender wise comparison also revealed that females had more smartphone usage duration with less sleep duration and high cyberslacking behavior as compared to male employees. Private sector employees showed more smartphone use duration with less sleep duration and high cyberslacking behavior as compared to government employees.

**Table 5**

*Frequency Distribution of Male and Female Participants According to Quality of Sleep (N=300)*

Sleep Categories	Men (n= 150)		Women (n= 150)	
	f	%	f	%
No difficulty (0-5)	78	52%	37	24.6%
Moderate difficulty (6-10)	57	38%	68	45.3%
Severe difficulty (11-21)	16	10.6%	24	16%

Table 5 demonstrates that 52% men employees reported no difficulty in sleep, where as 38% had moderate level of difficulty in sleeping. Among female employees 45% reported that they face moderate difficulty in sleep and 16% had to face severe difficulty in sleep. These results shown that overall female employees had more sleep related issues.

#### **4.1 Confirmatory Factor Analysis**

For present research cyberslacking scale was translated into urdu language. To check and confirm its factor structure in indigenous context confirmatory factor analysis was run.

**Table 6**

*Confirmatory Factor Analysis of Cyberslacking Scale*

Factors & Item No	$\alpha$	Factor Load
Factor 1: Sharing	0.93	
1		0.75
2		0.79
3		0.78
4		0.75
5		0.78
6		0.77



---

Factors & item No	$\alpha$	Factor Load
7		0.78
8		0.67
9		0.77
Factor 2: Shopping	0.92	
10		0.80
11		0.77
12		0.80
13		0.78
14		0.74
15		0.82
16		0.74
Factor 3: Real-time updating	0.92	
17		0.82
18		0.80
19		0.79
20		0.77
21		0.80
Factor 4: Accessing online content	0.88	
22		0.74
23		0.66
24		0.68
25		0.77
26		0.71
Factor 5: Gaming/gambling	0.70	
27		0.71
28		0.53
29		0.73
30		0.71

---

Table 6 shows that all items of the cyberslacking scale has factor loadings greater than .50 therefore, all items were retained.

### Table 7

*Model Fit Indices of Confirmatory Factor Analysis for Cyberslacking Scale (N=30)*

Model	$\chi^2$	Df	$\chi^2 / Df$	CFI	IFI	TLI	RMSEA
Measurement Model (5 Factor Model)	1932.63***	405	4.77	0.90	0.89	0.90	0.05

Df= Degree of Freedom;  $\chi^2$ = Chi-sq; CFI= Comparative Fit Index; RMSEA= Root Mean Square Error of Approximation

\*\*\* $p < .001$

Table 7 demonstrated the model fit indices of cyberslacking scale. As results indicated, the model was acceptable ( $\chi^2 = 1932.627$  ( $df = 405$ ),  $p < .001$ ; RMSEA = 0.05; CFI = 0.90). However, all items had factor loadings greater than .50. Hence findings revealed that CFA showed a good fit for translated version of cyberslacking scale.

Correlation analysis was run to find out the relationship between the respective study variables i.e. smartphone addiction, cyberslacking, sleep quality and self-control with each other along with the significance level. Descriptive statistics were also calculated to check the alpha reliability, median, standard deviation, skewness and kurtosis.

**Table 8**

*Inter Scale Correlation, Alpha Coefficients, and Descriptive Statistics of the Study Variables (N=300)*

Variables	No. of Items	1	2	3	4
1.SAS-SV	10	-	.90**	.63**	-.61**
2.CSS	30		-	.63**	-.63**
3.PSQI	19			-	-.39**
4.BSCS	13				-
A		.94	.97	.80	.93
M		38.98	96.23	6.40	38.12
SD		13.22	28.30	3.46	5.89
Skew		-.410	-.311	.394	.215
Kurt		-1.28	-1.29	-.50	-.60

Note. SAS-SV= Smartphone Addiction Scale-Short Version; CSS= Cyberslacking Scale; PSQI= Pittsburgh Sleep Quality Index; BSCS= Brief Self Control Scale;  $\alpha$ = Cronbach Alpha; M= Mean; SD= Standard Deviation; Skew= Skewness, Kurt= Kurtosis

\*\* $p < .01$

Table 8 shows the correlation between four respective scales/study variables along with the alpha reliability and other descriptive properties. The correlation and significance level of the scales in SAS-SV scale shows that smartphone addiction has significantly positive correlation with cyberslacking ( $p < .01$ ) and sleep quality (poor sleep quality) ( $p < .01$ ) but significantly negative correlation with self control ( $p < .01$ ). Significant positive correlation was found between cyberslacking and poor sleep quality ( $p < .01$ ) and significant negative correlation of cyberslacking with self control ( $p < .01$ ). Poor sleep quality shows the significant negative correlation with self control ( $p < .01$ ).

Alpha reliability values of the respective scales i.e. SAS-SV, CSS, PSQI and BSCS show that all the scale have sound reliability. The values of skewness and kurtosis shows the normality of the construct as the values are in the range of -2 to +2 that shows the normal distribution.

**Table 9***Correlation and Descriptive Statistics of the Factors of CSS (N=300)*

Factors	1	2	3	4	5
1.Sharing	-	.88**	.81**	.84**	.67**
2.Shopping		-	.83**	.75**	.61**
3.Real time updating			-	.74**	.65**
4.Accessing online content				-	.67**
5.Gaming/Gambling					-
<i>M</i>	31.03	22.76	15.90	17.64	8.90
<i>SD</i>	9.06	8.07	5.92	5.04	2.84
Skew	-.324	-.167	-.233	-.584	.197
Kurt	-1.11	-1.45	-1.13	-.72	.32

Note. CSS= Cyberslacking Scale; *M*= Mean; *SD*= Standard Deviation; Skew= Skewness, Kurt= Kurtosis  
 \*\* $p < .01$

Table 9 shows the correlation between the factors of cyberslacking scale along with the descriptive properties. Factor 1 i.e. sharing shows the significant positive correlation with shopping ( $p < .01$ ), real time updating ( $p < .01$ ), accessing online content ( $p < .01$ ) and gaming/gambling ( $p < .01$ ). Factor 2 shows the significant positive correlation with real time updating ( $p < .01$ ), accessing online content ( $p < .01$ ) and gaming/gambling ( $p < .01$ ). Factor 3 shows the significant positive correlation with accessing online content ( $p < .01$ ) and gaming/gambling ( $p < .01$ ). Factor 4 shows the significant positive correlation with gaming/gambling ( $p < .01$ ). All the factors of the scales have shown the significant positive relationship with each other ( $p < .01$ ) with the mean and standard deviation values. The values of skewness and kurtosis shows the normality of the construct as the values are in the range of -2 to +2 that shows the normal distribution.

## 4.2 Regression Analysis

To see the role of smartphone addiction in cyberslacking and sleep quality linear regression was run.

**Table 10**

*Regression Analysis of Smartphone Addiction on Cyberslacking (N=300)*

Variables	B	$\beta$	95% CI	
			LLCB	ULCB
Constant	20.37***		16.20	24.55
Smartphone Addiction	1.94***	.909	1.84	2.04
R <sup>2</sup>	.827			

Note. N=300; SE= Standard Error;  $\beta$ = Beta; R<sup>2</sup>= R square  
\*\*\* $p < .001$

Table 10 revealed the impact of smartphone addiction on cyberslacking in employees. The R<sup>2</sup> value showed that predictor variable explained 82.7% variance in the outcome variable with (F (1, 298) = 1423.694,  $p < .001$ ). The results revealed that smartphone addiction positively predicted cyberslacking ( $p < .001$ ). Unstandardized beta value indicates that every one unit increase in smartphone addiction will increase cyberslacking by (1.94) units.

**Table 11***Regression Analysis of Smartphone Addiction on Sleep Quality (N=300)*

Variables	B	B	95% CI	
			LLCB	ULCB
Constant	.100***		1.05	0.85
Smartphone Addiction	.167***	.636	0.14	0.20
R <sup>2</sup>	.404			

Note. N=300; SE= Standard Error;  $\beta$ = Beta; R<sup>2</sup>= R square  
 \*\*\* $p < .001$

Table 11 revealed the impact of smartphone addiction on sleep quality in employees. The R<sup>2</sup> value showed that predictor variable explained 40.4% variance in the outcome variable with (F (1, 298) = 201.908 ,  $p < .001$ ). The results revealed that smartphone addiction positively predicted sleep quality “poor sleep quality” ( $p < .001$ ). Unstandardized beta value indicates that if other variable is kept constant every one unit increase in smartphone addiction will increase poor sleep quality by (1.67) units.

### 4.3 Mediation, Moderation and Moderated Mediation Analysis

Main study also dealt with some intricate analyses that were to see the mediating role of self-control in relationship between study variables and to further examine moderating role of gender in this mediated relationship. To test this conceptual model of study moderated mediation was done through Hayes macro process.

**Table 12***Conditional Process Analysis (Moderated Mediation Model, N=300)*

<b>Model</b>	<b>Coefficient</b>	<b>SE</b>	<b>T</b>	<b>LLCI</b>	<b>ULCI</b>
<b>Mediator variable model</b>					
Smartphone Addiction (SA) → Self Control	-0.14**	0.06	2.33	-.02	-.18
Gender → Self Control	0.84***	0.06	14.0	.66	.97
Gender → Cyberslacking	0.13**	0.05	2.6	.07	0.17
Gender → Sleep Quality	.06	.04	1.5	-0.03	0.07
SA x Gender → Self Control	0.08*	0.04	2.0	-.16	-.008
SC x Gender → Cyberslacking	0.14**	0.06	2.33	0.04	0.17
SC x Gender → Sleep Quality	0.02	0.03	0.66	-0.03	0.08
<b>Dependent variable model</b>					
Smartphone Addiction → Cyberslacking	0.79**	0.04	5.38	.17	.37
Smart Phone Addiction → Sleep quality	0.16**	.01	11.17	.13	.19
Self control → Sleep quality	0.001	.03	.02	-.06	.06

<b>Model</b>	<b>Coefficient</b>	<b>SE</b>	<b>T</b>	<b>LLCI</b>	<b>ULCI</b>
<b>Indirect Effect Model</b>					
Smartphone Addiction → self control → Cyberslacking	0.11**	.04	4.25	.09	.23
Smartphone Addiction → self control → Sleep Quality	-0.01	.002	.12	-.04	.03

**Conditional Indirect Effects of Smartphone addiction and CS through self-control at values of gender male and female**

	<i>Effect</i>	<i>Boot SE</i>	<i>Boot LLCI</i>	<i>Boot ULCI</i>
Male	.13	.03	.05	.20
Female	.17	.05	.07	.29
<b>Index of Moderated Mediation</b>	.04	.02	.01	.12

**Conditional Indirect Effects of Smartphone addiction and sleep quality through self control at values of gender male and female**

	<i>Effect</i>	<i>Boot SE</i>	<i>Boot LLCI</i>	<i>Boot ULCI</i>
Male	-.0002	.0092	-.018	.017
Female	-.0003	.0126	.07	.29
<b>Index of Moderated Mediation</b>	-.0001	.0003	-.007	.008

Bootstrap =5000, 95% confidence interval, LL= Lower limit, UL= Upper limit, S. E= Standard error. Boot= Bootstrap size = 5000; SA= Smartphone Addiction; CS= Cyberslacking; SQ= Sleep Quality; SC= Self-control  
\* $p < .05$ , \*\* $p < .01$

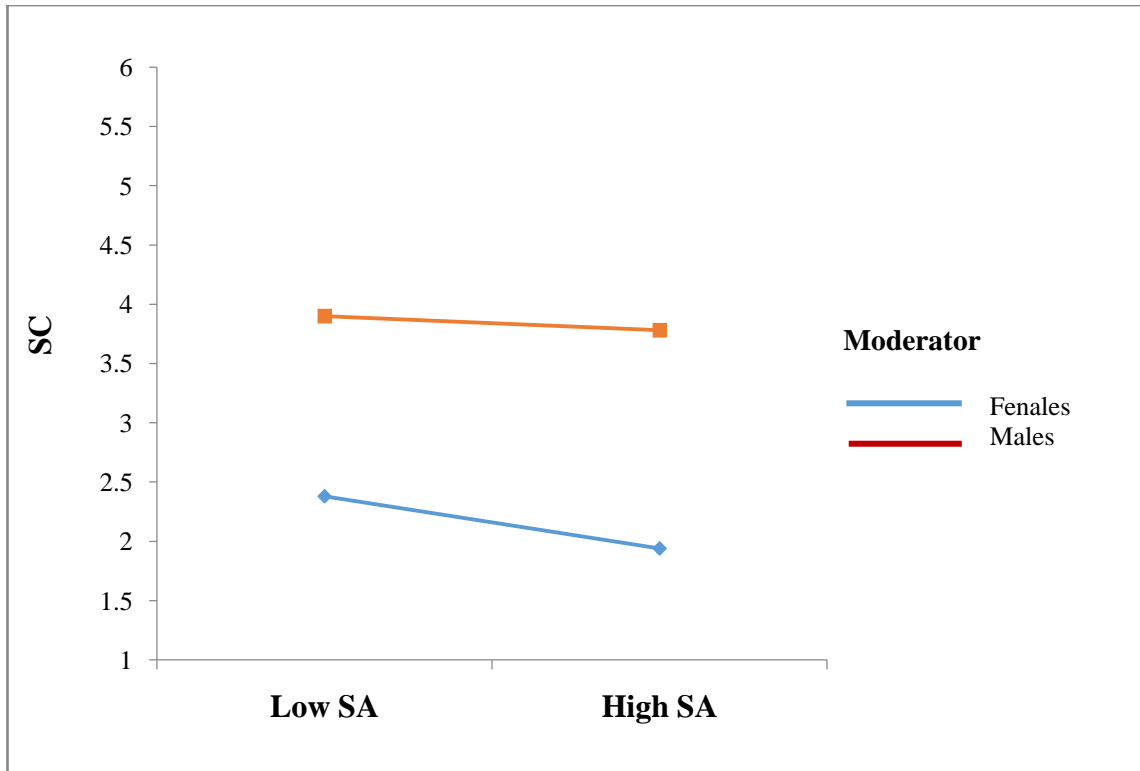
Table 12 shows the mediation effect (self control) on smartphone addiction, cyberslacking and sleep quality (poor sleep quality), moderation effect (gender) on smartphone addiction, cyberslacking and sleep quality (poor sleep quality) and moderated mediation effect on the same study variables. The results indicated that the self control shows the significantly negative relationship with smartphone addiction ( $p < .01$ ) and cyberslacking ( $p < .01$ ) but non significant positive relationship with poor sleep quality ( $p > .05$ ).

Moreover, the results for the indirect effects confirm the significant mediating role of self control in the relationship between smartphone addiction and cyberslacking (indirect effect = 0.11,



95% CI with LL = 0.09 and UL = 0.23). Findings revealed that indirect effect of smartphone addiction on sleep quality via self control was non significant (indirect effect = -0.01, 95% CI with LL = -0.04 and UL = 0.03). Hence mediation was not established.

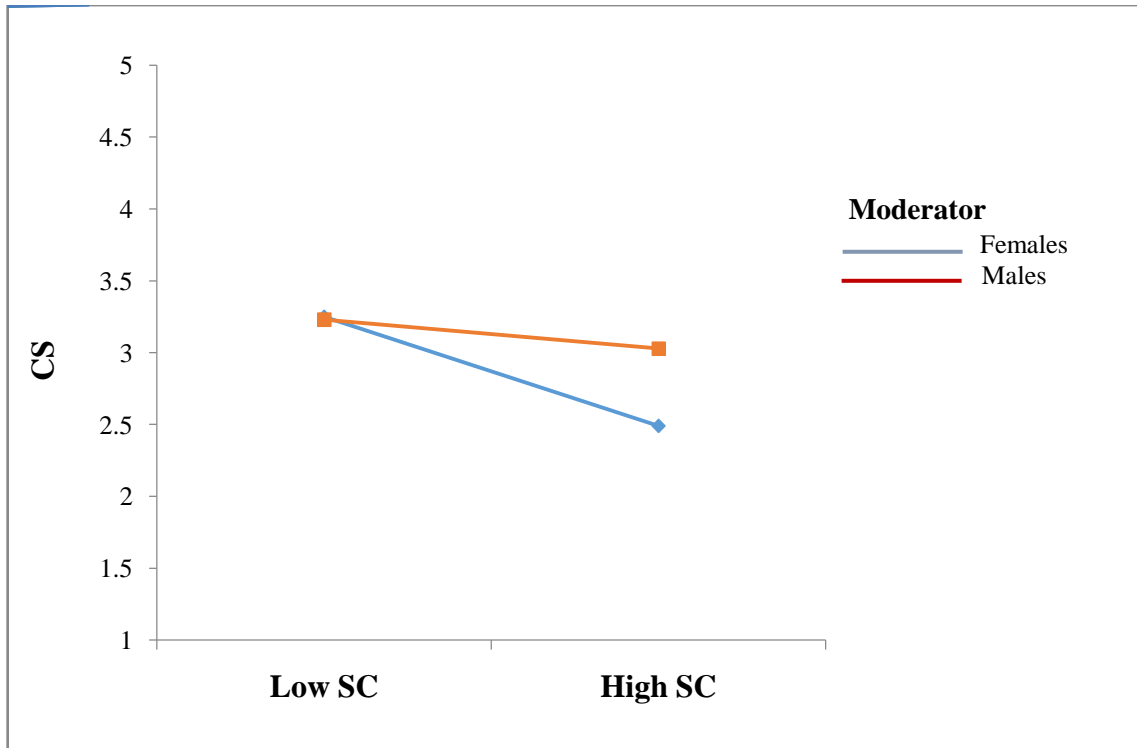
Findings also determined the moderating role of gender for the relationship between smartphone addiction and cyberslacking, smartphone addiction and poor sleep quality through self control. Before testing the proposed relationship, the product term of the independent and moderator the interaction effect of smartphone addiction and gender was mean-centered as per Aiken et.al (1991) recommendations. The interaction effect of smartphone addiction and gender was found to be positive and significant ( $p < .05$ ). Results for moderated mediation revealed that the conditional indirect effect of smartphone addiction on cyberslacking via self-control had significant differences and it was weakened in men employees (Effect = 0.13, LL 95% CI = 0.05, UL 95% CI = 0.20) but found higher in women employees (Effect = 0.17, LL 95% CI = 0.07, UL 95% CI = 0.29). Results revealed that indirect effect was conditional at values of moderator (gender) hence moderated mediation of gender in the relation between smartphone addiction and cyberslacking via self control was established. Findings also determined the conditional effect of gender in the indirect effect of smartphone addiction on sleep quality (poor sleep quality) via self-control but that did not have prominent differences between men and women employees (Effect = -0.002, LL 95% CI = -0.18, UL 95% CI = 0.017), (Effect = -0.003, LL 95% CI = 0.07, UL 95% CI = 0.29). Hence moderated mediation of gender in the relation between smartphone addiction and sleep quality via self-control was not established.



Note. SA= Smartphone Addiction; SC= Self-control

Figure 13. Moderating effect of gender in predicting smartphone addiction and self-control among employees

The modgraph shows the moderating effect of gender in predicting self-control from smartphone addiction. The value and shape of slope for both gender shows the negative relationship between predictor and outcome. However the slope line is steep and sharp in case of female employees as compared to male employees.



Note. SA= Smartphone Addiction; SC= Self-control

Figure 14. Moderating effect of gender in predicting self-control and cyberslacking among employees

The modgraph shows the moderating effect of gender in predicting cyberslacking from self-control. The value and shape of slope for both gender shows the negative relationship between predictor and outcome. However the slope line is steep and sharp in case of female employees as compared to male employees, indicating low level of self-control leading to high level of cyberslacking or vice versa.

Some further analyses were run with regard to demographic variables such as gender, age education level and job sector. Independent sample t-test and multivariate analyses of variance was run to see the differences across above mentioned demographic variables.

**Table 13**

*Mean, Standard Deviation and t-values Across Gender of Participants on Study Variables (N=300)*

Variable	Men (N= 150)		Female (N= 150)		<i>t</i> (298)	<i>p</i>	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Smartphone Addiction	37.05	13.38	40.91	12.80	-2.55	.01	0.30
Cyberslacking	90.83	28.30	101.64	27.33	-3.36	.001	0.40
Sleep Quality	5.76	3.47	7.04	3.34	-3.24	.001	0.38
Self Control	38.46	5.30	37.78	6.42	.99	.32	0.11

Note. *M*= Mean; *SD*= Standard Deviation; *p*= Significance value

Table 13 shows the mean difference on smartphone addiction ( $p < .05$ ). Findings revealed that women employees scored higher on smartphone addiction as compared to the men employees. The value of Cohen's *d* ( $p < .50$ ) indicated small effect size. Findings revealed significant mean difference on cyberslacking ( $p < .05$ ). It shows that women employees scored higher on cyberslacking as compared to men employees. The Cohen's *d* value ( $p < .50$ ) indicated the small effect size. Results revealed the significant mean difference on sleep quality ( $p < .05$ ). It was indicated that women employees scored higher on sleep quality i.e. poor sleep quality as compared to men employees. The value of Cohen's *d* ( $p < .50$ ) demonstrated the small effect size. Results have showed the non-significant mean difference on self control ( $p > .05$ ). Findings revealed that there was a mean difference of self control between women employees and men employees but the difference was non significant as value of significance was less than .05. The Cohen's *d* value ( $p < .50$ ) indicated a small effect size.

**Table 14**

*Mean, Standard Deviation and t-values Across Job Sector of Participants on Study Variables*

(N=300)

Variable	Private Sector (N=170)		Government Sector (N=130)		<i>t</i> (298)	<i>P</i>	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Smartphone Addiction	39.62	12.90	38.15	13.63	.943	.000	0.11
Cyberslacking	98.10	27.61	93.80	29.09	1.29	.001	0.15
Sleep Quality	7.60	4.35	6.13	3.61	1.13	.000	0.14
Self Control	37.74	5.91	38.61	5.86	-1.27	.20	0.15

Note. *M*= Mean; *SD*= Standard Deviation; *p*= Significance value

Table 14 shows the public and private sector wise differences among employees. Results showed the mean difference on smartphone addiction ( $p > .05$ ). Findings revealed that private sector employees scored higher on smartphone addiction as compared to the government sector employees and the difference between them was significant as the value of  $p < .01$ . The value of Cohen's *d* value ( $p < .50$ ) indicated small effect size. Findings revealed significant mean difference on cyberslacking ( $p < .01$ ). It shows that private sector employees scored higher on cyberslacking as compared to government sector employees with significant differences of mean ( $p < .01$ ). The Cohen's *d* value ( $p < .50$ ) indicated the small effect size.

Results revealed the significant mean difference on sleep quality ( $p < .01$ ). It was indicated that private sector employees scored significantly ( $p < .01$ ) higher on sleep quality i.e. poor sleep quality as compared to government sector employees. The value of Cohen's *d* ( $p < .50$ ) which demonstrated the small effect size. Results have showed the non-significant mean difference on self control  $p > .05$ . Findings revealed that there was a mean difference of self control in private

sector employees and government sector employees but the difference was non significant as value of significance was greater than .05. The Cohen's d value ( $p < .50$ ) which indicated a small effect size.

**Table 15**

*Mean, Standard Deviation and Multivariate Analysis of Variance Across Age of Participants on Study Variables (N=300)*

Variable	20-35 years (N= 151)		36-50 years (N= 116)		51-above (N= 33)		$\lambda$	$\eta^2$	F
	M	SD	M	SD	M	SD			
Smartphone Addiction	38.76	13.33	39.24	13.30	39.09	12.78	.97	.000	.04
Cyberslacking	96.68	28.74	96.61	28.69	92.84	25.25		.002	.26
Sleep Quality	6.38	3.58	6.27	3.33	6.90	3.51		.003	.43
Self Control	38.19	5.83	38.20	6.29	37.45	4.75		.002	.23

Note. M= Mean; SD= Standard Deviation;  $\lambda$ = Wilk's Lambda;  $\eta^2$ = Partial Eta squared

\* $p > .05$

Table 15 shows that one way multivariate analysis of variance was determined to analyze the mean difference between different age groups on the study variables including smartphone addiction, cyberslacking, sleep quality and self control. The multivariate model shows the non significant mean difference between different age groups on study variables with  $F(8, 588) = 1.04$ ,  $p > .05$ ;  $\lambda = .97$ , partial  $\eta^2 = .01$ . Separate univariate analyses additionally assured the non significant differences ( $p > .05$ ) across all age groups on smartphone addiction  $F(2, 297) = .04$ ,  $p > .05$ , cyberslacking  $F(2, 297) = .26$ ,  $p > .05$ , sleep quality  $F(2, 297) = .43$ ,  $p > .05$  and self control  $F(2, 297) = .23$ ,  $p > .05$ . Though mean scores indicate slight differences yet these differences are not significant.

**Table 16**

*Mean, Standard Deviation and Multivariate Analysis Across Education of Participants on Study Variables (N=300)*

Variable	Intermediate and below (N= 21)		Bachelors (N= 78)		Masters and above (N= 201)		<i>λ</i>	$\eta^2$	F
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Smartphone Addiction	39.71	11.66	39.63	13.18	38.66	13.44	.92	.001	.19
Cyberslacking	96.42	27.20	95.92	29.18	96.34	28.19		.000	.01
Sleep Quality	6.90	4.04	6.70	3.55	6.23	3.38		.005	.73
Self Control	39.62	5.09	38.08	6.27	37.98	5.83		.005	.74

Note. *M*= Mean; *SD*= Standard Deviation;  $\lambda$ = Wilk's Lambda;  $\eta^2$ = Partial Eta squared  
 $p > .05$

Table 16 shows that one way multivariate analysis was determined to analyze the mean difference between different age groups on the study variables including smartphone addiction, cyberslacking, sleep quality and self control. The multivariate model shows the non significant mean difference between different education levels on study variables with  $F(8, 588) = .96, p > .05$ ;  $\lambda = .92$ , partial  $\eta^2 = .01$ . Separate univariate analyses additionally assured the non significant differences ( $p > .05$ ) between intermediate and below, bachelors, masters and above on smartphone addiction  $F(2, 297) = .19, p > .05$ , cyberslacking  $F(2, 297) = .01, p > .05$ , sleep quality  $F(2, 297) = .73, p > .05$  and self control  $F(2, 297) = .74, p > .05$ . The mean scores show minor differences in different education levels regarding study variables but that difference is non significant ( $p > .05$ ).

## CHAPTER 5

### SUMMARY, DISCUSSION, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Summary

The aim of the present research was to study the smartphone addiction, cyberslacking, sleep quality and self control among employees. Since it has been an important part of our life that in the present society everybody is so much dependent on his/her smartphone that one cannot imagine life without it. People utilizes smartphone which have numerous applications with so much of the details regarding everything that makes persons' life easy. Even during work time at workplace whenever a person gets free time or for the purpose of relaxation from work for few minutes he/she grabs the smartphone to check the feeds on social media sites, or to message someone or to make a call. A person becomes so much dependent that he/she cannot resist oneself from doing such things that are making him addicting to the gadget, that is unethical in working environment. Self-control is an important factor that leads to smartphone addiction which in turn affects work related behaviors and sleep quality. Emission of bright light from the smartphone also affects person's sleep quality in adverse manner.

For the purpose of having support from literature and theories, many past studies have been mentioned in the research and several theories have been taken into account in support of current study variables. Conceptual model have also been made. A conceptual model is a structure that is at first utilized in the study to layout the potential strategies or to introduce a concept or notion. At the point when a model is created in a coherent way, it will impart precision and accuracy to the research.

Current study was conducted in three parts. Translation of the measures were carried out in Part-I of the study. Part-II was consisted of pilot study and Part-III was consisted of main study. Part-



It has further three steps: step-I was try-out phase, step-II was forward translation and step-III was backward translation.

Two of the scales were translated by following the forward backward translation method in the current research. Smartphone addiction scale-short version (SAS-SV) was originally translated by Kwon et al in 2013 in English language and it was translated in Urdu language by current researcher. Another scale which was also translated in Urdu language was cyberslacking scale (CSS) that was originally developed by Akbulut et al in 2016 in English language. After the translation process pilot study was also conducted on 100 participants in order to examine psychometric properties of the respective scales, and in the last main study was conducted.

The current study was fact finding, correlational and descriptive in nature. Quantitative method was used in this study with four different variables including smartphone addiction, cyberslacking, sleep quality and self-control. In the current research, four different types of research tools were used to gather the responses which were required from the participants of this research. All ethical considerations and research guidelines were kept in view by the researcher. To check the impact of gender differences, the sample of the research was separated into two groups that was men and women in order to check the impact of gender-based differences, and for that sampling method which was used was convenient random sampling.

For the assessment of smartphone addiction, SAS-SV (Kwon et al., 2013) containing 10 items was used. Cyberslacking scale (Akbulut, 2016) contained 30 items merged in 5 factors was used to assess the cyberslacking behavior in employees. Pittsburgh sleep quality index (Buysse et al., 1989) contained 19 items merged in 7 components was used to determine the sleep quality of the participants. Self-control was assessed by using Brief Self Control Scale (Tangney et al., 2014) contained 13 items. For discovering the outcomes and analysis IBM SPSS 21, Amos and Hayes

macro process was utilized.

The results related to following hypothesis have revealed that the study variables had significant positive and negative relationship with each other ( $p < .01$ ). Gender difference was also found as significant on smartphone addiction, cyberslacking and poor sleep quality but non significant on self-control. CFA on Cyberslacking scale was also run that shows the suitability of the construct to the actual study data. Regression analysis also demonstrated that smartphone addiction positively and significantly predicted the cyberslacking and poor sleep quality ( $p < .001$ ). Multivariate analysis revealed the non significant mean difference on study variables across different age groups and education levels. The results of moderated mediation have revealed conditional effect of gender in the indirect effect of smartphone addiction on cyberslacking via self-control was established and indirect effect of smartphone addiction on sleep quality via self-control was not established.

## 5.2 Discussion

The current study was conducted to measure smartphone addiction, cyberslacking, sleep quality and self control among employees. Considering presently the significance of smartphone in our lives, study was planned to dig out its effects on employees' health and work behaviors. Now a days everybody utilizes smartphone since it has numerous accessible specifications which are absent in basic cellphone. Smartphones vary in price rates from low to high in the market with the goal that maximum people can manage the cost of it. Individuals invest their large portion of the energy and time by utilizing smartphone applications and become dependent on it and begin utilizing it in workplace also either it is an office because of the availability of internet and free packages, which lead them towards cyberslacking and later on due to low self-control are unable to hold themselves. Finally individual become so much addicted to smartphone that he/she is unable to resist from it even at bed time for long hours that lastly impact their sleep quality.

Statistics of demographic variables of the study stated that there were 150 males and 150 females of different ages that ranges from 20 and above, having different educational level (i.e. intermediate and below, bachelors, masters and above). Participants were doing job in various private and government sector organization, institutions and companies on respective lower and higher grade job position. The number of employees with different smartphone usage duration and sleep duration statistics were also reported (Table 4).

Keeping in view the objectives of main study frequency distribution according to sleep quality shows the number of those participants falling in different categories of sleep quality. The percentage of male participants who lie in different sleep categories that are: no difficulty (52%), moderate difficulty (38%) and severe difficulty (10.6%) (Table 5). The number of female participants who lie in these three respective sleep quality categories were also determined (Table 5).

Table 6 shows the factors loadings of all the items of the translated version of cyberslacking scale. Factor loadings were above 0.40 that was indicated that all items can be retained in the scale.

Table 7 shows the model fit indices for confirmatory factor analysis for cyberslacking scale. Confirmatory factor analysis was directed in Amos 26 to test the construct validity of the cyberslacking translated version of scale. Various researchers have proposed distinctive fit indicators (chi-squared, CFI, IFI, TLI and RMSEA) to affirm the validity of the CFA model (Hu & Bentler, 1999). The current study yielded excellent model fitness dependent on past researchers' suggestions, chi-square ( $\chi^2$ ) = 1.93, CFI = 0.90, TLI = 0.90, IFI = 0.89 and RMSEA = 0.05. The five-factor model of cyberslacking was acknowledged, affirmed the construct validity.

Correlation, alpha reliability and descriptive statistics of all the scales that have been used in the current research were also assessed. The current study presumed that smartphone addiction is positively related to cyberslacking. The findings of research showed that the smartphone addiction

has significant positive relationship with cyberslacking (.90\*\*,  $p < .01$ ) this lends support to hypothesis no.1 (Table 8). One past study demonstrated that the long-term indulgence in smartphone usage among people could be attributed to the easy accessibility of their electronic devices to the internet that enables the person to use smartphones even during working hours that ultimately leads to cyberslacking behavior (Chen et al., 2019). The previous research showed that smartphone addiction effects cyberslacking positively and vice versa. In view of this outcome, it is very well declared that employees' degree of showing cyberslacking behavior in working climate during working hours will build their inclination to have smartphone addiction. With smartphones, interruptions in the working environment have expanded. It tends to be proposed that cyberslacking, which is characterized as utilizing smartphones in working hours for the reasons that are unimportant to work exercises, can contrarily influence employees working performance, tasks and productivity. Besides, smartphone applications can trigger cyberslacking practices and this prompts a dependence on smartphones and creates addiction to it (Cevik et al., 2016)

The relationship pattern determined between smartphone addiction and sleep quality revealed significant positive correlation (.63\*\*,  $p < .01$ ) that confirms hypothesis no.2 which presumed positive relationship between variables (Table 8). Previous research lends support to the findings in which it was demonstrated that smartphone addiction is directly linked with disturbances in sleep so longer smartphone screen time has been associated with shorter sleep duration and poor sleep quality (Kumar, 2019). Another study demonstrated that smartphone backdrop illuminations might disruptively affect circadian rhythms with related sleep outcomes, for example, dozing later than expected and in this manner lessening general sleep time , so more of the smartphone usage it ultimately turns into smartphone addiction and then sleep quality will be more poor (Dong et al., 2018; Jiang et al., 2007). The past research recommended that employees who utilize their

smartphones more at sleep time have more danger of being poor sleepers and will have poor sleep quality (Alshobaili & Alyousefi, 2020).

The relationship pattern determined between smartphone addiction and self-control revealed significant negative correlation ( $-.61^{**}$ ,  $p < .01$ ) that confirms hypothesis no.3 which presumed negative relation between variables (Table 8). The past research also support the findings in which it was revealed that the smartphone addiction and self control are negatively correlated with each other for example, findings of Lee et al. (2014) showed the similar pattern of relationship between smartphone addiction and self-control. One previous study revealed that due to advancement in technology in the media transmission world, functionality of smartphone and its usefulness and moment a single tick admittance to messages, and generally famous programs and video mediums have expanded mental unsteadiness. It makes the person uninformed of the progression of time and steadily reliant upon the internet and smartphones. Surely, the propensity to feel lost, bothered and uncomfortable without their smartphones and becoming exhausted effectively are the qualities of persons' dependence to smartphones. Mentally, this wonder is likewise viewed as an appearance of side effects of absence of self-control over willful tasks as self-control has been characterized as a person's psychological ability to adjust, alter, change, or supersede their motivations, wants, and constant reactions so more of the usage of smartphones that causes addiction, lesser will be the self control (Ding et al., 2021).

It was reported in the findings that cyberslacking has significant positive correlation with poor sleep quality ( $.63^{**}$ ,  $p < .01$ ) that confirms hypothesis no.4 which presumed the positive relation between variables (Table 8). The logical reasoning of this can be like when person is so much into the use of smartphone and internet all the time even in working hours then firstly the bright light of the screen effects the person's mind and secondly person use the smartphone all day long during working

hours too so work will go on pending, that will effect a person psychologically and when person is about to complete the office tasks at home during night time then the disturbance of the work will effect the sleep quality. So cyberslacking is increasing, poor sleep quality will also increase.

Findings of this research revealed that cyberslacking has significant negative correlation with self-control ( $-.63^{**}$ ,  $p < .01$ ) that confirms hypothesis no.5 which presumed negative relation between variables (Table 8). One past research also supports the finding and suggested that cyberslacking behavior is caused by a lack of self-control (Kim & Byrne, 2011). Another study demonstrated that individuals that are low in self-control have a lower level of inner voice and have a excessive chance of performing deviant behavior because they prefer the instant and quick gratification on the prompt advantages and a lower importance to deferred costs when contrasted with in person that rates high in self-control. This remains constant with regards to cyberslacking where people that rate low in self-control have been shown more prominent chances for cyberslacking behavior (Pearson & Urgin, 2008).

Findings revealed that poor sleep quality has significant negative correlation with self-control ( $-.39^{**}$ ,  $p < .01$ ) that confirms hypothesis no.6 which presumed negative relation between variables (Table 8). One past research support the findings and revealed that when a person has low self control the sleep quality will be more poor. By this finding it was demonstrated that sufficient duration of sleep and good sleep quality increases the positive mood in the person instead of negative that effects the level of self control. it was revealed that poor is the sleep quality lower will be the self-control (Liu et al, 2020).

Table 9 shows the correlation among 5 factors i.e. sharing, shopping, real time updating, accessing online content and gaming/gambling of CSS (Cyberslacking Scale). Findings revealed that all the factors have significant positive relationship with each other and contribute positively to the

construct ( $p < .01$ ).

Item total correlation was also calculated in the present study. Item total correlation of Smartphone Addiction Scale-Short Version shows that all items of the scale are positively correlated with the total of the scale. It means that the scale has the good internal consistency with minimum 0.55 to maximum 0.67 range. Item total correlation of Cyberslacking Scale shows that all items of the scale are positively correlated with the total of the scale. It means that the scale has the good internal consistency with minimum 0.57 to maximum 0.84 range. Pittsburgh Sleep Quality Index shows the item total correlation within the range from 0.62 to 0.89, the items of the scale are positively correlated with the total of the scale. Item total correlation of Brief Self-Control Scale shows that every item of the scale has positive correlation with total score of the scale within the range from 0.72 to 0.90. It was revealed that all the scales i.e. SAS-SV, CSS, PSQI and BSCS has good internal consistency and every item of each scale contributes to the respective constructs.

Table 10 shows the regression analysis in terms of impact of smartphone addiction on cyberslacking and findings revealed that smartphone addiction (predictor) positively and significantly predicted the outcome variable that is cyberslacking ( $p < .001$ ). In past research it was argued that smartphone applications which trigger cyberslacking behavior are associated with a addiction to smartphones (Cevik et al., 2016).

Table 11 demonstrated the regression analysis in terms of impact of smartphone addiction on poor sleep quality and results revealed that smartphone addiction (predictor) positively and significantly predicted the outcome variable that is poor sleep quality ( $p < .001$ ) (Table 15). The previous research demonstrated that smartphone addiction is related with sleep quality. When a person is so much addicted to smartphone that thing creates sleep issues which causes poor sleep quality (Akgonul et al., 2015).

Table 12 shows the mediation effect, moderation effect and moderated mediation effect on smartphone addiction, cyberslacking and poor sleep quality. Findings revealed that indirect effect of smartphone addiction on cyberslacking via self-control was significant ( $p < .01$ ). Hence hypothesis 8 is proved.

Results also revealed that indirect effect of smartphone addiction on poor sleep quality via self-control was not significant ( $p > .01$ ). Hence hypothesis 9 is not proved. Findings also revealed the moderation effect on the study variables. The interaction between smartphone addiction and gender was found to be significant ( $p < .05$ ). Interaction between cyberslacking and gender, self-control and gender was found significant. Interaction between sleep quality and gender was non-significant. It was revealed that gender has the significant moderation effect between smartphone addiction and self-control ( $p < .05$ ). Gender was moderated significantly between self control and cyberslacking ( $p < .01$ ) but non-significantly between self-control and sleep quality ( $p < .05$ ). Results for moderated mediation revealed that the conditional indirect effect of smartphone addiction on cyberslacking via self-control had significant differences and it was weakened in men employees but found higher in women employees. Results revealed that indirect effect was conditional at values of moderator (gender) hence moderated mediation of gender in the relation between smartphone addiction and cyberslacking via self-control was established that confirms the hypothesis 10 and 11.

Findings also determined the conditional effect of gender in the indirect effect of smartphone addiction on sleep quality (poor sleep quality) via self-control did not have prominent differences for men and women employees, hence moderated mediation of gender in the relation between smartphone addiction and sleep quality via self-control was not established. Hence hypothesis 12 is not proved.

Current research revealed the statistically significant difference across gender of participants



on study variables i.e. smartphone addiction ( $p < .01$ ), cyberslacking ( $p < .001$ ) and sleep quality ( $p < .001$ ) as the significance value is less than .05, which suggest that there is a gender difference among males and females on smartphone addiction, cyberslacking, sleep quality. Women scored higher in these three respective variables as compared to men. Finding revealed that women were more addicted to smartphones, they cyberslack more and had poor sleep quality as compared to men (Table 13) that confirms hypothesis no.7 which presumed the gender difference on study variables. Past research expressed that women are more dependent on smartphones when contrasted with men and have less self-control and women are more into check their messages, and to peruse instagram and facebook more than men (Ha et al., 2016).

Results reported that self-control shows the non-significant mean difference between men and women employees ( $p > .319$ ) as significance value is greater than .05, there was a difference that exists between men and women like women employees reported less self-control than men but that mean difference was non-significant difference ( $p > .05$ ) that confirms the hypothesis no.7.

Table 14 shows the mean difference between private and government sector employees in smartphone addiction, cyberslacking, sleep quality and self control. Findings revealed that private sector employees scored higher on smartphone addiction, cyberslacking, sleep quality and self-control as compared to government employees. Results have demonstrated the significant mean difference in smartphone addiction ( $p < .001$ ), cyberslacking ( $p < .01$ ) and sleep quality ( $p < .001$ ), that confirms hypothesis no 13, but revealed the non significant mean difference in self-control ( $p > .05$ ). Findings demonstrated that private sector employees were more addicted to smartphones and do more cyberslacking and had poor sleep quality as compared to government sector employees. Findings also suggested that self control is less in private sector employees in comparison to government employees but that difference of mean between them is non significant as significance

value is greater than .05 ( $p > .05$ ).

Table 15 shows the mean difference on study variables through multivariate analysis across different age groups of employees. Results revealed the non significant mean difference across different age groups i.e. 20-35 years, 36-50 years and 51-above years on smartphone addiction, cyberslacking, sleep quality and self-control. Findings shows that the employees who falls in the age category of 36-50 years showed more smartphone addiction and cyberslacking with poor sleep quality and low self-control as compared to other two age categories but that mean difference was too small as significance value was less than .05.

Table 16 shows the mean difference on study variables through multivariate analysis across different education levels of employees. Results revealed the non significant mean difference across different education levels i.e. intermediate and below, bachelors and masters & above on smartphone addiction, cyberslacking, poor sleep quality and self-control. Findings revealed that the employees who falls in the education category of intermediate and below showed more smartphone addiction and cyberslacking with poor sleep quality and low self-control as compared to other two education categories but that mean difference was too small as significance value was less than .05.

### **5.3 Conclusion**

The vast majority of us in the present time are carrying smartphones which is absolutely impacting us in every aspect. Individuals who excessively use smartphone may experience individual, social and workplace issues. Utilizing smartphones for extended duration of time even at work or before sleeping time may lead towards cyberslacking behavior and poor sleep quality because of low level of self-control.

To conclude, the recent study has focused on smartphone addiction and its impact on employee health and work related behavior in terms of cyberslacking. Negative relation of smartphone addiction and

cyberslacking with self-control indicating that low level of self-control leads to smartphone addiction and cyberslacking. Smartphone addiction, cyberslacking and poor sleep quality were all positively related to each other. Moreover findings also indicates that self-control mediates the relationship of smartphone addiction and cyberslacking, that means self-control has a important role in the person with smartphone addiction that leads to cyberslacking. It was also found that self-control doesn't mediate between the relationship of smartphone addiction and poor sleep quality that means sleep quality can be poor because of some other reasons instead of self-control itself. Another finding revealed that there is a gender difference in smartphone addiction, cyberslacking sleep quality and self-control among men and women in which women are more addicted than men as they have less self-control and more cyberslacking with poor sleep quality. So women needs to overcome the smartphone addiction in order to lessen the cyberslacking behavior and they can do all this by practicing self-control techniques. Its necessary to be aware of the consequens of the addictive behavior and the behavior that violates your work environment ethics and ultimately leads you to adverse consequences.

#### **5.4 Recommendations**

It is recommended that future researchers may expand the number of participants by having suitable time limit and resources in order to have better generalizability. It is recommeded to future researchers that the consequences of smartphone addiction and cyberslacking have not discussed in the current study so that can be discussed in future research for better understanding to people. It is also recommended that to explore the impact of frequency and time spent in cyberslacking activities and smartphone usage on employees and for that any other indicators regarding cyberslacking behavior and smarphone addiction would also be consider and used. Effects of poor sleep quality and low self-control can also be discussed. More demographics can likewise be included in future

research to know most of the components and their involvement. Self-control was the mediator in present research and was a standout amongst other potential pathways towards smartphone addiction and cyberslacking, there can be other additional possible mediators such as personality traits can mediate between the relationship of smartphone addiction and cyberslacking that future researchers can investigate. The present research was self-report study, rather than this future research can gather information in regards to smartphone addiction and cyberslacking by using qualitative method of analysis for less ambiguities and detailed information. The present research did not explain the kinds of activities in which employee is involving on his/her smartphone (like gaming, web surfing, apps running) members were dependent on their smartphone in particular point of time, researchers in future should assess the idea of activities that smartphone users participate in on smartphones and the measure of time spent on these activities.

## **5.5 Managerial implications/Suggestions**

This study will be valuable for policymakers and investigators as it will assist associations or companies to control smartphone use and cyberslacking at work environment and the effect on work execution as employees' lower execution, low efficiency is one of the critical issues looked by associations, organizations and companies nowadays. This research will somehow help the policymakers with knowing the concealed explanation behind the concerned matter. This study will help associations, organizations and institutions with making strategies or a couple of rules to extent that employees' usage of the smartphone at work for individual reason will not impact their performance, efficiency and the company's targets. The utilization of the smartphone may be restricted for specific timings or separate zones may be made for this purpose. This study will help policymakers with establishing a versatile and strong environment where employees can use smartphones at work for a specific time or for unwinding basis. The intervention programs and

workshops should be organized which can improve employees' self-control and furthermore give information about smartphone addiction consequences and cyberslacking reasons and outcomes. It is suggested that managers can effect person's future direction and self-control to decrease employees cyberslacking behavior. For example, two techniques are proposed for decreasing cyberslacking practices. To begin with, managers and administration of organizations could prepare their employees to make a drawn out profession plan on the side of their life objectives. Second, organization can work on self-control ability of the employees, or can foster their self-guideline abilities.

## **5.6 Limitations**

There are some limitations that should be addressed here. First, the current study was carried out in Rawalpindi and Islamabad due to the shortage of time and Covid-19 situation. Second, the sample of the study was also small ( $N=300$ ) due to the same pandemic situation that's is Covid-19. Third, since this research relied on self-report measures, it defied the actual flaws of self-report research. The respondents might be reluctant to truly report their genuine situations on the inquiry such negative personality traits, practices and behaviors. The new mode of investigation related to assessing smartphone addiction and cyberslacking may add to findings, such as qualitative analysis and observational modes can lead to further investigation.

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