

Dependency On Social Media and Its Effects On Users



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Dedication

This dissertation is dedicated to my late beloved, ***Daniyal Sabir***, whose presence, though brief, left an indelible mark on my heart for years and beyond. His unconditional love was a provision of all the resilience I had needed to navigate this academic pathway alongside coping with the loss of his murder. I truly believe that his name was meant to be inscribed here as a testament to his influence in my life.

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“May we always remember that God is merciful and kind. Amen!”

.

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Abstract

The current study aims to observe a relationship between temporal aspect and patterns of social media usage, social media dependency and resultant psychological and behavioral implications. In-depth it investigates in (1) examining a relationship between social media usage and social media dependency, (2) analyzing a mediating role of social media dependency between social media usage and its effects, and (3) exploring a relationship between social media dependency and cognitive and pro-social outcomes. Founded on Media System Dependency Theory (MSDT) from a micro-scale perspective, a quantitative approach was opted to measure the variables. Data was collected from students of two major universities, Bahria University (E-8 campus) and Quaid-i-Azam University, and was later analyzed using regression and mediation techniques. It was found that social media usage patterns significantly predict dependency goals among users. Male respondents showed a prolonged social media usage from historical perspective, whereas female respondents were found to be highly engaged with social media on daily basis. Furthermore, social media usage of male respondents revealed instrumental patterns in comparison to female respondents whose higher frequency of social media usage led to purposeful but leisure usage too. The dependency goals, understanding and orientation, were found to be strongly inter-connected. Also, the mediating analysis demonstrated significant intermediary linkage between patterns of social media usage and cognitive and pro-social outcomes. Overall, the findings underscore a dual role of social media dependency, both as a behavioral driver and a psychological influence.

Keywords: Social Media Dependency; Social Media Effects; Media System Dependency Theory; Cognitive Implications; Pro-Social Behavior.

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CHAPTER 1

INTRODUCTION

1.1 Overview

This is an introductory chapter of what this current study encompasses. It provides a reader with an insight into this research work with a particular aspect to the background of social media emergence, its expansion in developing country like Pakistan, potential cognitive challenges faced by the users, especially youth, and integration of positivity in behavior due to dependence on it. This research encapsulates traditional media system dependency theory on a micro-scale in the context of social media to assess cognitive and behavioral outcomes of the respondents from Bahria University Islamabad Campus (BUIC) and Quaid-i-Azam University (QAU). The chapter concludes with a study rationale from a literary viewpoint, problem statement and objectives of the current study.

1.2 The Rise of Internet and Social Media

A humanoid need to socialize stems back to history when there wasn't a digital facet of technology to communicate and disperse information. From telegraph to computer, each era refined the process of communication bringing along challenges and convenience. It wasn't much till world saw wonders of internet. The traces of internet's

birth can be found back during 1957 in a form of an American project for convenient communication during times of war, i.e. *Advanced Research Project Agency* (Baran, 1964). However, by 1980s the digital messaging system became utilizable for educational institutes in the form of internal communication. The internet became accessible to common people in the form of World Wide Web in 1989 by Tim Berners-Lee. Pakistan, as an underdeveloped country experienced internet for the first time in 1995 when different Internet Service Providers (ISPs) were distributed to different cities of the country from largest city Karachi (Petter and Seymour, 2000).

As sky is the limit, internet went through different facets prior getting formed into what people could call as ‘self-regulated’. Turns out, initially it was another centralized system of information regarding news, politics, entertainment and marketing for people after the tradition media. Although swift, it still was a controlled domain and wasn’t much liberated for public use till the rise of Web 2.0 that yielded a convenient interactive platform; Fang stated the computerized mechanism as ‘by the people, for the people’ (2015). Web 2.0 is also defined by O’reilly (2007) as internet-based tools responsible in the evolution of content modification and dispersal by the common public. It is well known for the fact that world in a communicative decorum saw a transverse upon emergence of digital technology some two decades ago due to people’s need for manual-control that molded this mediascape into a spectrum of personal digital usage known as social media during 1990s–2000s (Taprial, 2012). An actual motive behind social media formation was to make the world more interconnected and developed like ‘global village’ as predicted by Canadian media theorist, Marshall McLuhan (1964), in his essay titled, *‘understanding media: the extensions of man’*. As aforementioned communicative paradigm driver by Kuhn (1996), not only did social media bring about an abrupt exchange in information but also got embed as a necessity in the lifestyles of people after its development.

1.3 Social Media and Its Comprehension

The terminology of social media met several definitions by scholars, belonging to different disciplines as per their comprehension since it was first experienced around the globe (Kent, 2010; Terry, 2009). According to Thurlow et al. (2004), the concept was more of a marketing slogan at the time of its birth and was not much known for its multi-interactive features in references to education, news etc. It is believed that numerous definitions were gathered by Christian Fuchs (2014) to present it as a single concept. However, the notion of social media remained contested due to similarity and contradictions in the beliefs of all those from multi-disciplines who attempted to define it (Hillegersberg et al., 2011; Xiang and Gretzel, 2010). Collectively, it could not be better put as, ‘networked database platforms that combine public with personal communication’ (as cited by Graham Meikle in his book, 2016). Still, as Hempel (1967) stated that without ample consensus on a concept it is often challenging to drive a theoretical understanding of vagueness.

There is an abode of disparity between the two concepts of ‘social media’ and ‘social networking sites. It has been argued that every social media platform is not a source of network provision as per its features. The very first definitive explanation of social media was given by Boyd and Ellison (2007) in their seminal work. They opted to define social networking sites (SNS) as per availability of an evident outlook and understanding of digital features at that time. It was argued to be a free pass for anyone desiring to form a networked populace of connections from an identity-based profile alongside a provision to alter that list of virtual connections anytime. This definition was believed to let astray the literary work of scholars from forming into a précised theoretical notion. In their cleansing efforts, Chan, Kelly, Russo, and Watkins (2008) defined social media as the new media which assisted online networking and collaboration amongst the people present in offline environments. Following ahead, Terry (2009) judged it from a perspective of traditional media and concluded that social media was an instant publisher in the hands of users. Haenlein and Kaplan (2010) defined social media to be human-to-human interface through a medium of Web 2.0 technology. Relatively, years later, Harvey (2014) also stated social media to be applications, built on a technological infrastructure similar to that of Web 2.0, that utilized a mechanism of World Wide Web, for users’

participatory involvement in content modification. Somewhat similar to the notion, Swar and Hameed (2017) defined the term as a broad array of digital interactive forums where users engaged in hobbies, shared content and dispersed personal opinions conveniently to develop a digital culture. Lewis (2010) understood social media as a digital branding of technology projecting an ease in digital communication, networking and information dispersal. A more precise comprehension of social media was laid down by Parks and Howard (2012) who believed that social media in the literary content were more of a representation of social networking sites like Facebook and YouTube, focusing least on a portraiture of their functionality. Interactive feature of social media was described by Kent (2010) who argued that the platform was a ground to build participatory activities. Likewise, social media was described as a virtual space where people interconnected with each other (González et. al., 2012).

In short, the earlier definitions were not concise or sufficiently explanatory to comprehend social media as a whole; it was likelihood a possibility to presume other communication technologies like E-mail by applying those understandings. Taking in consideration Berger's (1991) identification of a need for ongoing developments in theoretical myriad due to progression in communication spheres, most of the conforming scholarly understanding of social media in the communication studies is on the basis of its nature of being technologically proficient (medium-based) irrespective of functional (communication-based) elaboration. There is a possibility that social media can be defined if researchers are able to define the medium from an angle of communication dispersal (Ledbetter, 2014). This relates that any social medium cannot be theoretically enclosed for comprehension due to its mobile nature. For example, if Facebook users shift their use patterns to another social media platform, a theory devised to understand social media from its perspective would no longer remain explanatory of the concept. Similarly, Twitter's ability to communicate through word-count as tweets still bounds it out of question to be defined as a digital medium from theoretical perspective because the user-interface experiences in provision by Twitter cannot be experienced by any other social medium. In their scholarship from School of Communication Illinois State University, Caleb and Rebecca (2015) put forth a more sophisticated definition of social media. They

asserted social media to be erected on internet, more channelized for mass-personal communication without the constraints of time and beneficially valuable to the users. Their primarily focus was to develop a profound foundation for future scholarly work on social media to progress for the upcoming twenty years, i.e. 2035. They also foresaw that years ahead, it is also for sure that constant fluctuations in the mediascape would complicate it further for the researchers to theorize the term ‘social media’ from a perspective of humanoid interaction due to an increasing popularity of dependency on non-humanoid communicative figures like online agents. This also poses a risk for the already extant communication theories such as electronic propinquity by Korzenny (1978). However, a study finding by Spence et. al. (2014) still endorses significance of humanoid communication by demonstrating that perceived interactivity plays a vital role in determining communicative styles of users when they associate with computer-generated responses instead of humans.

1.4 Functionality Of Social Media

Today’s modern era of technology is a trademark of a reality predicted long before by scholars (Biocca and Nowak, 2003; Guadagno et al., 2008; Reeves and Lim, 2010) when it was unbelievable to conceive that social media platforms would pierce a barrier of offline and online setting by getting blended into our lifestyles in a way that won’t require a log-in through a personal desktop or web browser. Rather, internet of things (IOT) i.e., smart devices like digital tablets or mobiles, would suffice the purpose (Morabito et. al., 2010). Since its conception the platform firstly comprised of social networking sites (SNS) that opened several gateways for social networking (Brandtzaeg and Heim, 2010), secondly, congesting it to mobile phones into a form of social media applications as per compatibility with specified operating systems (Toshie, 2008) and thirdly, it’s now in line getting adaptable with Web 3.0 technology including artificial intelligence (Hendler et. al., 2001). Since decades, social media haven’t failed users’ expectations as they have proven to be a functional alternative irrespective of socializing

agents' absence or presence in the lives of users. From routine use of forming interpersonal connections (Wei, 2022), to depending on it for developing an understanding of several perspectives on social issues, individuals have found social media quite useful. It might also not be inadequate to state that social media paves a pathway to feel a sense of belonging in a virtually connected world. The rise of digital platforms as communication channels has modified how people exchange meaningful information on micro and macro levels across geographical restrictions (Greenwood and Gopal, 2015) and this personal mass communication is believed to enhance as the world becomes more digitalized (Boyd and Marwick, 2011; Walther, Carr et al., 2010). A transformative role of social media was observed by Lilleker and Jackson (2011) when they saw a tilt in how users formed dependency on the digital domain for not just a purpose of 'playfulness' but also for political as well as social efficacy and communication leading to collective actions in a society. An existing body of literature represents a fact that social media's popularity is on surge in the recent years (Kemp, 2020; Leong et al., 2019). No doubt, an advent of digital media has brought better ways for society to get organized and let individuals learn about their environment in much better and collaborative manner sometimes not requiring even a concrete form (Rheingold, 2003; Steinkuehler and Williams, 2006).

With an incredible ability to get connected, according to statistics of 2019, an impact of social media is believed to stretch afar. In accord to Roser and Ortiz (2023), an estimate of 2.4 billion people used one of the popular social networking platforms, Meta's Facebook. The active global users of social media were estimated to be 4.89 billion during 2023 with a prediction of surging to six billion by year 2027 (Statista, 2024). Much of the estimates in observing social media dependency accounts for another cautious attention; demographic group of youth and its continuous perforation in the web of digital communication. Campbell and Twenge (2019) note that majority of the young people are found to be pre-occupied with social media for longer duration in forming digital interactions and playing online games. From five years' record, about 60% of young American population, less than 34 years of age, used Instagram for an instant snap sharing (Statista, 2020). An outburst of COVID-19 and a complete social distancing had seen a

great rise in social media dependency during 2020 accompanied with a fall-out of usage percentage in 2021 (Stacy, 2024).

The concluding estimates of Statista in November 2024 revealed a total of 67.5% worldly population to be netizens where 63.8% were found to be the social media users. According to a report by Pew Research Center (2021), approximately 70% of people in the U.S. consumed a popular social media platform Facebook, meanwhile 49% considered using it as a daily ritual. Another estimates by Global WebIndex (2024) unveils that 62.3% of the world's population uses social media for more than two hours. Also, surprisingly another measured estimate is believed to be exceeding on day-to-day basis making 3.5 billion people as netizens in case the world population ought to be 7.7 billion. Almost two-thirds of netizens use social media, and about one-third are active on social media for information sharing and social interaction. Approx. 51% of the American teenage individuals say that they find it difficult to get detached with the medium as it's an absolute necessity for them (Gallup survey, 2023). The worldwide time spent by users on social media amounts to 143 minutes a day as of recent analysis by Statista (2024).

From above, it can be deduced that social media is a fundamental necessity of every individual, with or without geographical restrictions, residing on this planet.

1.5 Social Media in Pakistan

It is also worth mentioning that advanced technology in the domain of communication has not only influenced individuals worldwide for a better connectivity and swift reach of information, but has also empowered the population of Pakistan. Similar in the context, borrowed from global index of social media users' scale, an estimate of 29.5% individuals are users of social media in Pakistan (DataReportal, 2024). This places the country into a better position of being digitally literate in competition with

the developed world, especially with a surging growth of smartphone market, smart tablets and wireless broadband (Memon, 2015). Previously, it was seen that the country comprised 76.38 million netizens out of which 37 million were users of social media (Hootsuit, 2020). The recent published statistics of January 2024 by Statista unveiled that 46.44 million users were utilizing Facebook for the gratification of their goals. This increasing media dependency on social media among the Pakistani population could be a clear indication of a larger impact on all dimensions of lives, i.e. personal and social entities.

For sure, due to its ongoing popularity and advancement, the digital domain has attracted a number of researchers and scholars in the region to observe how it is consumed, relied upon alongside being influential. It is observed by Campbell and Twenge (2019) that involvement with social media embarks implications, especially on young users' use habit as well as behavior. Social media is believed to embark history and hence deserves a cautious understanding of this modern system of communication (Anouk, 2012). This comes forth when there's a crucial need, presumed, to opt a mid-line between advantageous and disadvantageous usage. The benefits of social media dependency, no doubt, pave another direction towards responsible consumption due to being hazardous in different ways (Hadjipanayis, 2019). Undoubtedly, being associated with social media yields opportunities for a connection in the absence of socializing agents, but its payback is usually in the form of not so pleasing outcomes on one's mental health (Utz and Wolfers, 2022) which has been debatable in literature (Martinsen, 2008). Oyewanda (2020) states a sound mental health to be rehabilitated in a social setting with an alertness in recognition of one's abilities to navigate through challenges of life in shoulder to shoulder being resilient to the unexpected state of affairs. A prolonged engagement with virtual world and a persistent withdrawal with social capital finds its way to impaired cognition (Berryman and Ferguson, 2018). Moreover, medium-based studies like that of on Facebook throws light on development of depressive symptom with a prolonged engagement with virtual reality (Whiteman, 2018).

From past and recent studies on social media, it is acknowledged that Pakistani netizens, especially youth due to its digital proficiency and literacy, met with a

compromised cognition following post-consumption of the content. Another terminology found in the literature is ‘social media addiction’. It refers to an impulsive urge to remain associated with social media even on the cost of other external factors risking one’s mental well-being (Andreassen et al., 2016; Kuss and Griffiths, 2017; Moreno et al., 2019; Turel et al., 2014). Research studies by some Pakistani scholars have observed negative outcomes on youth’s academic performance due to an involvement with social media for more than the average time (Fahhad et. al., 2018). Another study finding revealed that youth displayed impaired familial relationships due to high dependency on social media platforms (Khan et. al., 2023). Following by these, some studies have marked concerns over youth’s social associations and mental well-being (Kashmala et. al., 2021). These research findings further call out for a need to foster care for youth’s emotional well-being.

In contrary, as Greenhow (2019) states that users find social media as a strong binding force with themselves and their surroundings that consequently aids in shaping their orientations within both the online and offline environments, the Pakistani youth exhibited no different involvement with social media for a sole intention to self-express or to become a social activist in comparison to the youth of developed world. A recent research Khalid and Muhammad (2023) found that Pakistan youth across different universities in the country portrayed a positive symbiosis with social usage and learning outcomes validating that social media is a progressing welfare source. Recently conducted research studies displays a positive role played by social media in promoting social activism. For example, Khan et. al. (2022) explored how Pakistani youth demonstrates unity during social or political situations by being active in signing online petitions for a social cause. From another dynamic, Shah et. al., (2021) explored the role of social media platforms, Facebook and Twitter, as tools of spreading environmental awareness, sparking reaction in support for various social causes, in particular reference to gender equality. Furthermore, a research conducted by Rehman and Jamil (2022) found that social media was becoming a gadget for growing activism irrespective of participants’ concrete presence. They also argued that social media was a free platform to amplify voices which otherwise meet no audience through traditional modes of communication. On a number of occasion, Pakistani youth utilized social media as a tool

of outreach to voice their concerns regarding social issues that demanded attention; from educational issues (Iqbal and Khan, 2021) to climate change (Aziz et. al., 2022), Pakistani youth have shown a great enthusiasm towards a solution-oriented approach demanding strategies for improvement in the mentioned areas. Their involvement and participation is worth appreciable from time to time further endorsing that it could necessarily be not possible if youngsters had not been active.

1.6 Significance Of the Study

Social media usage has a variety of repercussions. The existing literary body focuses on the general notion of social media usage and its resulting repercussions; however, the specific function of social media dependency and its contribution to these repercussions has received very less attention. This limited investigation shows that our present understanding of how and why social media dependency develops, as well as how it affects users from cognitive and behavioral perspective, is insufficient. Addressing this gap, the current study adds to the growing body of research on social media by providing a better understanding of how social media usage shapes people's dependence on these platforms, and how it leads to psychological and social outcomes.

1.7 Statement of the Problem

The rapid growth of social media has modified how people obtain information, education, entertainment, and social contact. Given its global reach, understanding the reasons and implications of social media usage has become a critical field of academic research. In Pakistan, the expanding population of active internet users (netizens) shows similar patterns of dependence on social media for cognitive and social fulfillment.

Literature review of past and present scholarship shows that the pleasure gained from social media usage, combined with its position as a virtual social catalyst, frequently leads to greater dependency and implications. Therefore, the current research study

looked into the temporal aspect and patterns of social media usage by Pakistani young population, examining how the temporal frame and patterns of consumption contribute to the formation of dependency and how that absolute necessity (reliance) on social media emerges in psychological and sociological dimensions.

1.8 Objectives of the Study

The study is conducted to look into the following:

1. To examine a relationship between gender, social media usage (temporal and patterns) and social media dependency.
2. To analyze the mediating role of social media dependency on the relationship between social media usage and effects.
3. To examine a relationship between social media dependency and the cognitive and behavioral effects on users.

CHAPTER 2

LITERATURE REVIEW

This chapter is sectioned as a reflective of some of the renowned studies which discuss and understand the three major conceptual components crucial to the current doctoral study i.e. media use, media dependency and media effects (cognitive and behavioral). The literature is examined from a historical perspective of the evolution and progression with which the media was used, relied upon and the formation of post-consumption implications as a result:

2.1 Studies on Media Usage

Media use is a foundational concept in mass communication research that aids in understanding how people and media engage with each other. People's media use enables them to select, comprehend and incorporate the content in their surroundings. The concept has enjoyed several scholarly definitions from time to time as per requirement of audience's junction with the present mediascape of its time. To dig deep down into its comprehension, evolution and how it associates with media and audience or users, it might be adequate to consider some of those basic and classical definitions. A well refined earliest conceptualization of media use was within the framework of uses and gratification by Katz et. al. (1974) who believed that it was an **active process** by which audience were free to select a particular portion of the media content to fulfill their need of curiosity.

They further believed that audience were capable to be self-aware of their needs and to expect gratification of their needs from a specific medium. In nearly two decades forth this, McQuail (1994) refined the concept in his book titled, *Mass Communication Theory*, stating it to be an **influenced behavior** as a result of social, psychological and situational circumstances. He stated that people's media use is for them to remain informed about societal issues, to comprehend norms and traditions of the living environment, for passing down cultural heritage and to seek a diversion. Moving ahead of times, encompassing technological benefits to communication, the concept was arranged by Livingstone (2004) as a **reformatory process** through which individuals engaged with digital interactive platforms to not only consume the media content but also to generate it. The advanced conceptualization of media use came forth by Ksiazek and Webster (2012) who discovered that people's media use had varying patterns between traditional broadcast media and digital streaming media. Their work comprised identifying involvement patterns as '**media repertoires**', a term earlier endorsed by Schroder (2011) stating 'audiences to be 'inherently cross-media', meaning that individuals utilized more than one platform as media use for the purpose of their personal, social and informational needs. Limperos and Sundar (2013) argued that the concept shifted its paradigm from old media to new media because individuals could attain possibilities of content selection in a way better than before. Taking this in count, a similar idea was placed by Napoli (2014) when he stated that media use is more controlled in content selection and is infact a multi-tasking involvement of an individual with more than one media outlets, simultaneously. In 2018, Benkler, et al., defined media use to be self-directed and algorithm-controlled within the context of social media claiming it to have disrupted how individuals involved with traditional media. Media use is also described as a **reactive-activity** settling on the foundations of emotional hyperactivity in social media users; a slight trigger could enhance users' reaction for contributing in the spread of misinformation (Aral et. al.,2018). Furthermore, in accord to (Bruns, 2008; Boyd and Marwick, 2018), emergence of social media modified the concept of media use into a **participatory engagement** where people availed opportunities for sharing content that aligned with their personal set of values and individuality.

The above described an evolutionary concept of media use. Now, peeping into the ancestral marks of people's media use, the literature emphasizes on the role of inner motivations and needs of people behind the cover (as cited by Ozer, 2016). As so words of Potter (2012) sums all, 'people develop strategies for media use to manage their needs'. The scholarly findings bear significance as they yield a groundwork of modern research arena in the similar context i.e. media use. Studies reveal that intention/motivation is an antecedent that derive audiences to media (Cantril, 1942; Erin and Associates, 2018), and was an actual interest of the past researchers to observe it as a correlation between audience and tradition media (Dominick and Wimmer, 1994). McQuail (2010) sorted the gratifications people could look for in media, namely, information seeking, education, mentorship, escapism into the fantasy, erecting a belief system, emotional release, identity reinforcement and leisure. Prior television or internet, radio is believed to be a primary broadcast medium for audiences in the 20th century as it played a crucial role in delivering timely information during times of crisis. Much of radio's significant role is observed during World War-II (Shaw, 2009). The very first outset of this kind is found to be in the earliest study, '*the psychology of radio*' by Cantril and Allport (1935) who aimed to study how well radio responded to the emotional needs of listeners. The study found that listeners' acceptance to specific radio content was in direct relevance to their set of values and personal emotional needs unveiling that media engagement had a connection with active motivations upheld by the audience. Another study on radio by Waples et. al. (1940) demonstrated that people used media content specifically for the purpose of surveillance. Similarly, in one of her ancient and well-renowned works, '*motivations and gratifications of daily serial listeners*', Herzog (1940) explicitly focused on female audience who identified that they sought three types of personal gratifications from broadcast media, i.e. radio, those of which were (i) emotional release, (ii) enjoyment or longing, and (iii) advice from radio anchorpersons. A different approach to study people's motivation in association with their use of specific medium was conducted by Lazarsfeld and Stanton (1942). They did a comparative analysis of radio with newspaper in order to determine audience's preference over each other. Findings revealed that radio served purposes like immediacy, entertainment and personal connectivity whereas newspaper served audience's need of surveillance. In another classical study of his with Field (1946), '*the role of radio in the American family in wartime*' it was concluded that

radio was responsible in gratifying audiences' informational as well as emotional needs during wide-spread war-time fear.

Later in 1949, Fiske and Wolfe tried to explore how children let print media, i.e. comics, to gauge their interest. Their study unfolded a fact that children preferred to read comics as it endured a great sense of escapism into the fantasy world of adventure and visual information. Similarly, research by Berelson (1949) on newspaper audiences showed that they had preferences for selecting specific content that could meet their needs to remain updated of the current happenings around, a knowledge about world and to remain integrated in their social networks for discourse. Also, an excerpt from a very earliest book of mass communication by Schramm (1954), *'What determines which offerings of mass communication will be selected by a given individual?'*, hints that audience had certain motivations and they were active members of the mass communication process. Also in his collaborative work with Parker and Lyle (1961), *'television in the lives of our children'*, he found that children's media use was merely for learning purpose apart from the real world around them. To elaborate further, they stated that television played a role of a socializing agent for children as per influence of their parents and friends. Similarly, Foulkes and Katz (1962) found that people engaged with media to divert their attention from routine chaos and stress emphasizing media use to be a relieving supplement.

Mendelsohn's study (1964) on radio marked another dynamic role of radio. In accord to him the medium served not just as an informative asset but also as a companion and aided in fostering social connections with others. The progression further led Dominick and Greenberg (1969); Gerson (1966) to examine how adolescents used television; it was found that an element of race persuaded youngsters' needs of surveillance and entertainment. Another evidence of antecedes was laid down by Blumer and McQuail (1969) who studied public's voting behavior during British election campaign of 1964. They concluded that people's media use was influenced by their strong and weak motivations regarding approval of political candidates.

Noteworthy here is the non-computer-mediated analyses of the above researchers in their works prior 1970s. For sure, the ancestry measurements to co-relate media use and sought gratifications led to a failed suitable conclusion as it did not produce enough adequate clue into an accomplishment of people's needs from media (Rayburn, 1996; Stanley, 2015). Henceforth, it led primary works of Herta and others to get dismissed due to controversial scientific-scale accuracy. From herein mass media researchers formed a newer vision to measure audience's gratifications during 1970s. This led Katz and Associates (1973) to make an ample journey in seeking how individual's media use was contributing in fulfilling their basic needs. In return it laid a strong foundation in refinement of the five core assumed motivations of audiences. In accord to them, people turned to use media so that they could attain fulfilment to their psychological and social needs; for instance, media served as a remedy of boredom, a socializing tool with peers, an informative guide and a relaxant. From here came a formulation of approximately five core assumed motivations of audience's media use by Blumler, Gurevitch, and Katz (1974) which were (i) information, knowledge or awareness (ii) emotional or entertainment (iii) personal connection, self-esteem, self-validation or self-credibility (iv) social, communal or networking, and (v) diversional or escapism. From another lee, it was also found that an individual's cognitive or affective motivation was responsible in determining his/her media use. For instance, Blumler (1979) unveiled that individuals' cognitive motivation led them to gratify their thirst of knowledge meanwhile their affective motivation inclined them towards diversion and entertainment. Also, Defleur and Rokeach (1970) progressed the research arena by presenting their model, *Media Dependency Effect Model*. Major notion of their work suggested inter-connectivity between the components of a system proving to be theoretically and practically very significant. However, since their earlier work was limited and did not discuss audience's motives behind media use, it was overcome by a debate on audience motivation and consumption. From 1980s onwards, in an onset to refine audiences' motivations and media use, Swedish professor, Windahl (1981) projected towards another dynamic of influence, i.e. **consequence effects** after operationalizing media use by (i) estimating involvement with the content, (ii) its genre, (iii) audience's involvement, and (iv) determining the reason behind consumption. Through his classical work, *'uses and gratifications at the*

crossroads', he believed that media outcome was a resultant of audience's motivation/need, perception of the content and the content itself. Leading on, alongside Rubin, he proposed refinements in the gratification perspective of audience through *Uses and Dependency Model* (1986). The model defined media use as a process by which the audiences selected, processed and interpreted the content. Following suit, Rokeach and Associates in their studies (1989, 1994, 2000) claimed media dependency as a result of three key needs of audiences: understanding, orientation and play which will be discussed later in this chapter.

Relatively, it was also discovered in the studies that gratifications were two-dimensional for the media content to process as per audience's expectations (Lin, 1993; Rokito et al., 2019; Tchernev and Wang, 2012; Yoo, 2011). This was validated by Garramone (1984) and McLeod et al. (1982) through their study on voters that 'desire for gratification of needs through media use' and 'attainment of needs through media use' were two varying yet important concepts for the literally work to progress. Later, a growing research arena revealed that pre-media use and post-media use contributed in causing attitudinal changes (Bhattacharjee and Premkumar, 2004), continuation in usage, and level of contentment (Bae, 2018). Taking similar approach into account, researchers (Palmgreen et. al., 1979, 1980, 1981; Wenner, 1982, 1986) combined 'gratification sought' and 'gratification attained' on television viewers in their research model to seek results. It was found that gratification attained should over-weigh gratifications sought in order for media use to sustain existence for audience (Chen and Lin, 2017; Ko et al., 2005). The approach was also adopted by researchers who aimed to study radio and print media (Larsen, 1982). Swanson (1987) argued that media message played a significant role in catching audiences' attention. Rayburn and Associates (1981) revealed that audience's preference of a particular news program interrelated with the level of attention given to newscasters. Their study concluded with a declaration, '*Much work remains to be done in illuminating the nature of the relationship between gratifications sought and obtained, the motivations behind such gratifications, and the ways in which such gratifications are related to media behaviour*'. Another study finding by Rubin (1983)

stated that television enhanced audiences' viewership validating that successful gratifications ought to surge media use.

Another important aspect unveiled by the researchers in those times was that people's motivations derive their frequency of media use. A survey on radio callers by Armstrong and Associate (1989) found that listeners who frequently called at radio talk shows were less social and had a prolonged engagement with the medium as compared to those who called less frequent.

On a voyage to seek an answer for why people use media, Krcmar and Strizhakova (2009) explained that those were infact antecedents inclining an association with media. One such perspective was discovered during a study by Rubin (1984) was that audience used media showcasing two kinds of patterns i.e. ritualized and instrumental. He argued that audience who viewed television as part of habit or leisure wanted to fulfill a void of relaxation and idolized the medium. However, those who intended to view television for informative content had a purpose and did not idolize it. The patterns also demonstrated a kind of interlinkage between them; ritualized could take a shift to instrumental as per requirement, need of an hour etc. From here on, researchers (Perse and Rubin, 1988) suggested a more thorough research on media use (gratification sought) than media exposure (gratification attained).

This inclined researcher to observe the motivations sought through media use in reference to audiences' personalities; Costa and McCrae (1988) assessed five types of people's personalities with media use. On the other hand, Eysenck (1991) evaluated three types of people's personality with that of their motivations and media use. Relatively, Anderson and Revelle (1995) also observed people's motivations and choice of media with their personality.

Late 1980s and early 1990s was a flourishing time of internet namely new media around the globe. Although traditional media was massive in power and new media was

individualistic (Sucu, 2014), yet it was believed to yield opportunities like demassification (Williams et al., 1988), interactivity (Williams et al., 1988), asynchronicity (Chamberlain, 1994; Williams et al., 1988), and self-presentation (Limperos and Sundar, 2013). Numerous studies by scholars (DiMicco & Millen, 2007; Holtz & Tredinnick, 2006; Pavlik, 1999; Reilly, 2005; Rogers, 1995) confirmed that, with better exposure of new media, people experienced an easy, instantaneous, and decentralized system of information consumption and dispersal. Dunn and Perse (1998) also stated that personal computers owned by people for new media use was yielding proper opportunities to replace traditional media i.e. newspaper, radio and television.

The technological emergence reformed the motivations and needs of individuals as per changing communication scape (Quan-Haase and Young, 2014). Consequently, it caused a collision of functional alternatives with the standard norms of personal gratifications that made individuals to swiftly adapt and rely on technology. The move inspired the researchers to dig down deep into this abrupt shift of media use by audience. Earliest research by Boczkowski, P. J. (2004) signifies audience's preferences for a digital newspaper and how newspaper institutes constituted policy to deliver information through new media forums for example a breaking of news without an interrupted delay. He noted that audiences preferred to adapt to a digital environment as they found it interactive and convenient for feedback provision.

An advent of internet also provided facilitation of escapism by being a solace of peace (Ruggiero, 2000). A study finding by Hoffman and Novak (1996) found that online audience were rejoicing their personalized experience of playlist making and downloading through one of the early music platforms. This was validated by Gauntlett and Parket (2005) that new media was able to gratify online audience's need of entertainment in a more sophisticated way than the customary modes of media. A survey analysis on internet users by Eighmey and McCord (1995) unveiled that users (previous audience) were more inclined to sought gratifications for their informational needs in comparison to the rest through their media use.

To observe social connections and their sustainability through a lens of new media, Wellman et. al. (2001), found that people found it frequent and instant to remain in touch with their peers through electronic mailing. They also argued that digital networking ability was proving helpful in forming new connections across borders. One more important discovery in their research was believed to be a formation of lively social capital by the efforts of active participants.

Another important hallmark of new media was a discovery of self-disclosure in the quest of studying online audience. Research by Gilly and Schau (2003) found that online audience were constructing online identities with a description about themselves and symbolism through their web-based profile layouts.

Furthermore, results of conducted research by Morris and Ogan (1996) gave researchers a clue into why the five basic core assumed motivations of audience's media use shall be considered for future investigation in the context of new media consumption from a perspective of both ritualized as well instrumental patterns.

On the other hand, inclinations towards new media from traditional media also observed an abrupt shift when the internet yielded several opportunities to individuals for exploring their media use patterns through varying dynamics (La Ferle et. al, 2000). Eveland (2003) argued that a featured new media integration into the lives of people was showcasing a thought-provoking statement by Greenwald and Leavitt (1984), "different media have different potential for boosting involvement". Media use of new media was observed variable in one of the very first study of varying involvement patterns by Jiang (2008). His research on 5/12 Sichuan earthquake unveiled that netizens surged in an estimate during the crisis and that individuals often surpass and reshape their gratifying habits when more than one functional alternatives are available for them to consume or disperse information. In a similar vein, Elizabeth (2000) contended that individuals effectively substituted the new media for television. She discovered that users consumed

the World Wide Web (www) as a diversion (escapism) in a similar way to how they watched television, indicating a change in media use brought about by the adaptability and accessibility of new media.

New media also mastered an art of immediacy further by outreaching development of the social media during mid-90s. Communication was introduced to this modern channel of dispersion after repeated trials by developers since 1970s (as cited by Simeon et. al., 2011). A final facet of social media was observed by public during 1990-2000 when Myspace, Wikipedia were released followed by Facebook (2004), YouTube and Yahoo!360 (2005). Not to mention, Windows Live Messenger became popular for chatting and staying connected with family and friends beyond geographical restrictions. Expectedly, this onset of social media boosted online audience's faith in media use empowering research directions to take a heap since the last 15 years on Facebook (Hanson & Haridakis, 2008; Krause et al., 2014; Lampe et al., 2011; Mull & Lee, 2014; Sheldon, 2008).

Scanning the earlier approach of 'gratification sought' and 'gratification attained', a study by Canadian researchers Gibbs et. al. (2014) on football lovers exemplified a notion of media repertoires when people used different media platforms, like radio, television, internet and Twitter, to obtain updates about matches, score summaries, player statistics etc. Results showed that each medium fulfilled fans' informational and emotional needs as per versatility; Twitter outshined the other platforms in providing instant updates alongside networking with peers to share about team performance, meanwhile those, who had looked for an in-depth analysis about the game, found solace in online articles and television coverage.

2.2 Studies on Media Dependency

As media use by audience saw an evolution from the twentieth century to post-modern era of advanced technological infrastructure, the communication researchers focused on how this persistent engagement with media led to a certain impulsive and repetitive activity. Since 1970 when computer-mediated assistance provided an upfront resolution to audience being active in the mass communication process, the concept has marked its imprints in the research arena till date. Noteworthy, dependency, in actual, is a set of cognitive arrays that consequently leads to **social exchanges** (Bryant et. al., 2008). Moreover, as a power-dissemination source to social infrastructure, an earlier well-recognized literary work of Emerson (1962) recognizes dependency as an **exchange relationship** between various actors in a system giving rise to avenues which lead to initiation and transaction. However, there is a control attached to the process; this exchange relationship further creates a complete reliance on a system due to repeated exposures (Davis et al., 2002). Thereon, researchers belonging to several disciplines mutually agree that dependency is an end product of consistency (Thadani, 2011). The conceptual abstraction also provides a foundational platform to process daily decision-making; for instance, to comprehend a wide social abstraction that media system of communication helps in yielding sources for understanding, orientation and action to the audience (Rokeach and DeFleur, 1976; Van Der Heide et. al., 2014).

During 1980s when media use and active audience were in major discourse of researchers, Wenner (1986) argued that audience preferred to form reliance on a medium that did seem to satisfy 'gratifications sought'. Not to mention, it was time for media dependency to flourish as people were found to be getting attracted in re-using the type of medium that could satisfy their needs.

The concept of media dependency is also found in a wide-spread literary work of scholars, each defining a somewhat similar phenomenon in best possible comprehension in different times. From an evolutionary lens the concept finds its traces into an era of 1976 when it was conceived by Sandra Ball-Rokeach and Melvin Defleur to be a **perceived reliability** by audience in fulfilment of their goals (needs) in comprehending social infrastructure through resources provided by the media. In accord to them, the

concept was a driving force to sustain systemic connections across audience's cognitive, affective as well as behavioral needs, media and society. However, later one of them observed that media dependency was **unpredictable** as it fluctuated between social class, status, power etc. (Rokeach, 1985). On viewing a mechanism of political communication through mass media, Becker et. al. (1980) defined media dependency as a **complex combination of reliance** on a medium due to frequency of media use to attain political efficacy. Rosengren (1994) argued that when dependency becomes inadequate by surrounding resources, individuals turn to gratify it from their socializing agents. Henceforth, a similar notion was molded by Rubin and Windahl (1986) who came to believe that media dependency was a **psychological state** of curious audience that enforced them to lean on the media as their reference frames for developing certain perceptions. They conceptualized media dependency with that of media use by active audience as an absolute reliability in times when other functional alternatives met inadequacy for 'gratifications attained'. Defleur and Dennis (1996) further stretched the concept in stating it to be a **mediating mentor** through which audience acquired understanding about things and events which they could not experience otherwise. They believed that media had a gigantic ability to mentor in situations where audience found themselves stuck under vagueness or a state of confusion. Ruggiero (2000) in his accumulated work on audience's media use since 1970s, stated media dependency to be a **networked alliance** of chains within people, media and organizations on societal functions like heritage, legislations and economy. Progressing further into the research arena, Gore et. al. (2005) defined the concept to be an occurrence of a **habitual connection** with mass communication system for seeking gratifications in regard to one's cognition, affective and behavioral needs. They stated media to be highly influential on self and social decision making ability through a reliance of this sort. Similarly, in the later advanced mass communication realm, the concept found relevance as a sole **resource provider** to people during situations when traditional interpersonal entities proved insufficient or unavailable to meet the required needs (Rosenberry and Vicker, 2009).

Media dependency made a remarkable journey into the literature after when

different scholars examined it by opting both the segmental (Individual) and collaborative (systematic) approaches in their studies.

The very first foundation of the literary work was laid by Rokeach et. al (1979) which was later available in 1984 as a public piece of information for the research arena to flourish. The main crux of the study was to analyze television's role in audience reliance on opinion formation regarding racism, sexism and environmentalism. It was predicted that audience who had a higher tendency for television dependence to attain understanding were to get affected by the television content. A survey analysis was done prior and after an exposure to the television content. Results of their study revealed that audience who had media dependency on television to understand social issues were influenced to an extent that they were readily volunteering to donate for protests like anti-racism, anti-environmentalism and anti-sexism. Following the very first experiment to presume that audience relied on media to fulfil their needs of understanding, a number of studies travelled down the road to the notion of media dependency (Halpern, 1993). The concept observed expansion in the parentheses of societal calamities and political communication. Prominently the primary work of researchers was supported more so during CNN Effect (1990) as global news coverage influenced foreign policy decisions during Gulf War (as elaborated in the 'Media Effects' section of this chapter).

Looking through a lens of individualistic approach, the concept is observed as a causal connection of a single member with media by scholars (Colman, 1990; Grant, 1991; Loges, 1994). An extensive study on television audience was carried out by Grube and Rokeach (1984) where the sample was exposed to a television program titled, '*The Great American Values Test*'. The result of their research demonstrated that the program was consumed more by those who depended on television for self and social understanding. Another study by David and Stephanie (1998) aimed to assess viewers' cognition and behavior through their individual media dependency patterns after consuming television content. They found that a higher television dependency was a direct source of large purchasing of goods. On the other hand, it is also seen that media dependency was variable under an influence of audience' dynamic belief systems

regarding types of media and exclusivity of the information. For instance, Becker and Whitney (1980) in their research work on political perceptions of audience through media under single ideology, assumed that results might unveil television's pessimistic role in development of political efficacy in comparison to newspapers which were believed to present an unbiased content. Similarly, Halpern (1994) conducted a study on the residents of Chile only to discover that media dependency, though strong, still bore suspicions of the information in provision to be biased under dictator political regime. Ahead of times, McDonald and McLeod (1985) initiated a comparative study on both newspapers and television to seek how well audience related their understanding of economic and political efficacy through both. The results revealed that media dependency on newspaper outweighed media dependency on television in terms of audience knowledge. Also a study finding by Jeffery (1995) concluded that audience assumed that newspaper was a better reliable source of information than the television could ever be. Their findings corroborated with the conclusions of a research by Nelson et al. (1997), who found that the print media was more effective at informing audiences than television.

From a perspective of communal or societal crisis, the literature deals with media dependency and its intensity during times of uncertainty; an earliest work of Hirschburg et al. (1986) is a best fit in ambiguous social situations. They concluded that media dependency took shifts from media to the functional alternatives as per intensity of the crisis. Approximately 80% of the affected populations turned to mass media (television and radio) as source of understanding the situation on a day of Mount St. Helens' eruption. However, the later days depicted that audience's dependency shifted from media to interpersonal sources for attaining understanding. On the other hand, Hindman and Kathy (1999) in their study on red river flood of 1997 bore consensus with Rokeach's (1980) ecological perspective of media's interlinkage with societal framework when their research findings discovered that public was determined to remain informed about the casualties and survival rate following a kind assistance laid by radio as their most trusted source of information. A research by Loveless (2007) on audience and media's relationship to understand a democratic system in Central and Eastern Europe found that public bore surging media dependency levels to attain political efficacy, knowledge about political candidates and their rights. Noteworthy are also some of the remarkable

contributions of scholars with their work on inter-dependencies between media and the system for the sake of collaborative interests (Guthrie, Power, Waring 1990).

Since earliest conceptual implication, one of another important element in the literary comprehension of media dependency is on how audiences/users form media repertoires i.e. variable involvement patterns of audience with the same and different media. Peeping into the role of television as a source of informational gratification, in orthodox of times, a research by Grube and Rokeach's (1984) requires a noteworthy acknowledgement. The researchers aimed to evaluate audience behavior following an exposure to a television series titled, *'The Day After: Fear, Communication, and Television in the Nuclear Age'*. They found that series remained in discourse of viewers as an element of speculations post nuclear conflict in the world. Also, audience's media dependency was observed comprising varying patterns; they were likely turning to other sources like news broadcasts and talk-shows to remain updated about the implications of nuclear warfare. Another such example can be seen into a classical study (2001) on the reformation of Chinese traditional media in 1996 after a liberation from an authoritarian regime. The results depicted different patterns of media dependency by newspaper readers; results unveiled that public had more than one choice (functional alternatives) to depend on for information when atmosphere became less constrained. Consequently, the political affiliated newspapers became less in consultation.

Moreover, through literature it is seen that media dependency shifted from one media form to another. In case after audience got victimized for being misinformed with unreliable information in the past, Yanzhong (2004) observed in his research on public's reliance on media during a severe acute respiratory syndrome (SARS) in 2003. The study unveiled that people lost their belief in Chinese traditional media as it gate-kept important coverage regarding the disease resulting into a great havoc and a compromised public health. This inclined people to shift their dependency goal areas of understanding and orientation on new media interactive platforms like World Wide Web (www) and Twitter. However, following broadcast fixation, the dependency patterns redirected towards the traditional media. From here on, a very first significant work, and a well knitted

exemplification of micro-macro alliance in uses and dependency model of media, by Hu and Zhang (2014) portrayed different results; media dependency outshined new media dependency because of traditional media's responsible coverage regarding Swine Flu (H1N1) in the region. Television was a widely used medium by audience to gain information during times of calamity when there wasn't any alarming situation. However, later two stages of the crisis determined variance in involvement patterns; new media dependency spiked for an urge of instant understanding of the situation. It is also worth mentioning that the emergence of new media led scholars to conduct comparative studies on media dependency within different media environments. Contributions of Jung, Kim, and Li (2012) are noteworthy as they compared individuals' media dependency on media platforms like newspapers, radio, television and internet. They found through results that audience/online audience were associated with new media in a similar way they were associating with traditional media.

Also, many scholars studied a new variation of new media within the traditional uses and dependency model, specifically some (Kubey, 2001; Lin and Tsai, 2002; Whang et. al., 2003), while also looking into a tri-relationship between media, audience/users, and society during routine times, environmental urgency, and immediate rescue. Padmini and Associates (2003) conducted a smaller-scale cross-sectional survey, at a large mid-western university of the United States, by conceptualizing Internet Dependency Relations (IDR) from a theoretical perspective of media dependency model. As a result, young users' dependency for attaining understanding and orientation goals depicted a positive symbiosis with new media. Additionally, media dependency was seen to have laid strong foundations for people in the study findings of Kim et al. (2004) who conducted a survey study on Americans after 9/11 terrorist attack. Their observation projected individuals' new media dependency to have enhanced if the digital medium was successful in an accomplishment of 'gratifications attained'. Moreover, mobile connectivity of individuals further inclined researchers to observe media dependency within tilted paradigm of communication (Jung, 2009; Maxian, 2014).

2.3 Studies on Media Effects

As seen through the previous notable work of scholars from the perspective of audiences' use and dependency on media, media effects for sure cannot be overlooked. Certainly, for practising social understanding of the world around, reliance on media is mandatory for a process to grow.

From literary evolution, the concept of media effects dates back to times when magic bullet notion was induced by Laswell (1927). Following horrors of World War-I, press was in an absolute power to gratify instant informational needs of the public i.e. hypodermic needle effect or narcotizing dysfunction (Lazarsfeld and Robert, 1946). It is much relevant to state that with 'if press stated, then it's authentic', audience were known to be **inactive** in content selection while giving media a complete control to inject its message in the mindsets as in how a bullet acts rapidly on a body (McQuail, 2010; Schramm, 1954). Moreover, the school of thought was believed to take a secondary fold in transferring its impacts on others from recipients, hence rephrased as Transportation or Conveyor belt (Arsane and Cassata, 1979). On the contrary, a counter argument stated that public was **not** solely dependent on media for getting literate. A concept of media to be an ultimate source of controlling mindsets was subsided by Lazarsfeld et. al. (1944) when they asserted that media content is limitedly affective and that media does not have a sole power. Terminology of 'opinion leaders' was put forward by them in which they described how information flow from media to an educated sect of a society from where it reaches general population. Another investigative study about media exposure and media effects by Shah et. al., (1996) suggested that people's voting behavior was influenced by their salient cultural values in addition to an exposure of political coverage.

A study by Lazerfeld et al. (1940) in Erie County Ohio was conducted in order to determine the formation, change and development of public opinion and political attitudes towards a specific presidential candidate. The purpose of the study was to determine the intentions of voting behavior of public and their choice of presidential candidacy. '*The People's Choice*' described the role of personal relationships, social groups and political

rallies in influencing voting ideas in the mindsets of people. But media coverage was also found to be significantly prominent in voting behavior of people.

Most noteworthy, a most notable and renowned work in studying a relationship between audiences and their reliance on media has been conducted by Defleur and Rokeach (1985). The sum of their study (1976) sketched a very first imprint of what they termed as '*A dependency model of mass media effects*', stating: 'Mass communication involves a complex relationship between large sets of interacting variables i.e., media, audiences and society. It is from this individual, interactive and systematic processing that media effects can be conceived'. Also, while taking in account an approach of Media System Dependency (MSD), media influence is a reflexive of a tri-relationship concerning audiences, institutes and media itself (Alan, 2015).

From onwards, Rubin (1986) states that media use, when adapted by active and goal-oriented audience, aids into a formation of certain media effects. Similarly, dependency does result into several outcomes and can be observed either via individualistic or socialistic outlook (Robert, 1995), those of which have already been discussed in the chapter.

It is also worth mentioning that media effects thought has evolved but are still a point of attention in today's academic debate. One of the most renowned impacts created by media was the CNN Effect during 1990s that had captured massive attention from a global perspective when world-wide news moulded point of views and foreign policies. Relatively, in the present digital mediascape, a query crosses one's mind to whether such a powerful impact still exists if generated by latest technological advancement in mass communication, i.e. world of internet and social media. Upon this, Bennett and Iyengar (2008) has put forth another dynamic, '*new era of minimal effects*', stating that the current media landscape is all functional through algorithmic personalization of the content and yields opportunities for solely selective exposure. Contrary, Garrett, Gleason, and Holbert (2010) argued that the nature of effects has changed their facet but they do exist and are strongly impactful on users. The mentioned debate validates that media is influential, however it has transformed into more complex and indirect ways than the classical CNN Effect model.

Below is an overview of world-wide studies which have observed media effects in particular relevance to social media use and dependency during recent times.

2.4 Review of Literature on Social Media Dependency: Cognitive and Behavioral Impacts Worldwide (2020-2023)

A span between 2020-2023 had been no different for the research arena in its spirits for emphasizing upon social media dependency and its post-consumption implications. However, global pandemic COVID-19 created an enhanced widespread reliance on digital communication during those times yielding both positive and negative consequences.

For sure, social media dependency correlates with cognitive challenges like depression, stress and anxiety. Research publications during 2020-2021 demonstrated a heightened level of mental exhaustion and isolation as a result of intensified digital connectivity. Adverse emotional consequences like loneliness and social detachment have been a point of discourse by *American Journal of Health Behavior* (2021). Two years ahead of time, American Psychological Association (APA) denoted a rapidly increasing social media usage in adolescents reporting an increased percentage of depressive symptoms.

In contrary to this, the timespan brought about positive influences on certain aspects of human life during the challenging period.

A prolonged social media usage is found to be disruptive for cognitive functions in an individual. Research arena is filled with studies dealing with how sustained involvement with social media contributes to depressive symptoms, low body image, self-esteem issues and anxiety. In the wake of global pandemic during 2020, these symptoms were found to have exceeded from their normal range; Shah et al. (2021) related that

social media dependency on virtual platforms like TikTok and Instagram led individuals to develop concerns about their appearances and outlook in a much stronger way during the global pandemic.

Moreover, reduced attention span and bad academic performance are associated with social media dependency. One such example can be relatable with research carried out by Kircaburun and Associate (2021) concluding that social media users exhibited lesser mental flexibility and often suffered from a lack of focus and poor productivity in their offline environments. Another major clue into problematic cognition was a development of tolerance and feeling withdrawn from one's offline environment. Satici (2021) believed that users possessing lower levels of resilience were projecting a surging percentage of adverse mental impacts of social media dependency. Likewise, research findings by Serenko and Turel (2022) further clarified that social media users bore symptoms of tolerance (acceptance of an exceeded content consumption beyond a normal spectrum) and withdrawal (negative emotions due to absence of digital connection) in situations where an access to digital connectivity was out of reach. Similarly, it was found by Chan and Wong (2022) that social media algorithms played a vital role in gauging the users' persistent interest towards their preferences and interests during times of distress. It was unveiled that users who were more dependent on social media during that time depicted signs of discontentment and withdrawal.

Not to mention, these two patterns were worth consideration as of their explanatory nature in how social media dependency hindered productivity in offline environments alongside disturbing an individual's decision-making ability.

One of the important aspects to be considered during the timespan was how social media dependency related with heavy users' sleep-wake cycles. An insight into a global survey by Becker et al. (2023) found that users complained of a lack of rest and extreme fatigue following post-consumption. It was found that late night involvement with social media platforms gave an opportunity to brain triggers to remain active, hence interfering with an individuals' ability to relax and rest.

It is also noteworthy to find that social media dependency influences emotional regulations of an individual as a driving force; research by Choi and Lee (2022) revealed that individuals with a sustained social media usage contributed to negative emotional outbursts like frustration and sadness. It could be adequate to say that social media dependency formed them from reflective to reactive.

Social media dependency is believed to foster ties of individuals with digital platforms on the expense of face-to-face interaction. Relatable here is a research study by Brown and Yang (2022) when they argued that an increased social media usage was believed to enhance triggers of isolation in a human brain. Consequences equally led to weakened social skills and lack of social interactions in general. Digital Intimacy provoked an artificial social bond inclining towards less satisfaction in users' offline environment.

From a perspective of social engagement of individuals, Boulianne et al. (2021) and Fisher et al. (2023) highlighted social media dependency in youngsters inclining them to engage with like-minded online communities especially in the critical moments. In accord to the findings of their study, this led to a formation of another adverse effect called acquiring homogenous identities (a sense of lack of broad-mindedness to understand individualities beyond a specified chamber). Often times, this results into biasness leading to divisions.

Taking in count the positive aspect of social media dependency and social constructivism (pro-social behavior), findings of a research study by Pan et al. (2021) unveiled that individuals who were actively associated with social media were likely to get indulged into social movements and communism. During global crisis like COVID-19, this needs to dependence on social media aided in gratification of information regarding disease and preventive measures. This suggested that social media could prove to be a helpful tool in collective social activities. Another study by Smith et al. (2021) reported that since the global pandemic restricted travel movements, travel-lovers became

virtual travelers by experiencing knowledge attainment about different cultures and countries. They were also found to be engaged in recovering tourism by various means like donations and digital campaigns etc. The activity was reportedly believed to be stimulating and affective especially during global lock-down to maintain a sense of belongingness and social connection with the rest of the world.

In addition to this, Hawkins and Kim (2022) discovered that a prolonged social media usage was believed to foster humanoid emotions such as humanity and empathy upon digital exposure across demographic borders. Users viewing and witnessing stories of hardships and resilience across globe through a virtual window possessed higher motivations to participate in social work and charities. Similarly, another study by Lim and Parker (2023) discovered that higher social media dependency provoked users to provide funds for medical and mental health welfare.

Nevertheless, another study by Shen and Xu (2021) reported social media dependency to be enhancing informative outreach across globe; digital platforms like Instagram and TikTok often yielded opportunities to view global events promoting opportunities of digital interconnections among individuals belonging to different culture and creed through activities like signing petitions and raising funds for a social cause, alongside sharing information about the world.

Moreover, Chen and Liao (2023) argued that travel-lovers who follow online celebrities and their vlogs learnt quite some information regarding ethical and environmentally friendly tourism. This aided in environmental welfare too.

2.5 Review of Literature on Social Media Dependency: Cognitive and Behavioral Impacts in Pakistan (2020-2023)

Benefits of social media connectivity has brought about different kind of challenges to the communication process itself. Asian region is no different in this regard. Many scholarships debate about digital/information age within the Pakistani contextual settings. Researchers highlight social media dependency and the consequences of post-consumption on Pakistani users, particularly youngsters (Ahmad et al., 2020; Rizvi et al., 2019). Following social media use and an identification of these consequences of post-consumption, strategists have continued to work on devising a range of preventative measures to minimize the impacts (Anderson & Jiang, 2018; Chassiakos et al., 2016; Kuss et al., 2017). Scholar in the present study critically evaluates social media dependency in the region and its consequences for mental health and social connectedness as follows.

Individuals' intrinsic needs to comprehend themselves and their surrounding find its traces from an objective of understanding in one of the earliest conception of Media Dependency (DeFleur and Rokeach, 1976). Some Pakistani scholarships revolved around this parameter to analyze how individuals educated themselves by the help of social media for social constructivism and personal gains. For instance, Ahmed (2022) looked into youth's political efficacy regarding general elections of 2018 to assess a response to the advertised political campaigns and rallies as well as political leaders and their agendas. With regard to gender empowerment, another study (2020) aimed to evaluate how Pakistani public got aware through social media campaigns talking about women rights.

Followed by an instinct, need to know, comes a need to adjust with developed perceptions about self and social sphere through media as proclaimed by DeFleur and Rokeach (1979). Scholars made a few research contributions during an outburst of COVID-19 to observe Pakistani individuals' dependency on social media platforms to gain knowledge about precautionary measures against the disease. It is noteworthy to emphasize that communication specialists have long noted that social interactions and interpersonal interactions, rather than media exposure, are the primary sources of information for individuals when making decisions (Katz and Lazarsfeld, 1955; Rogers, 1962). Henceforth, Irfan and Associates (2023) conducted a study to determine factors responsible in influencing users' opinion on COVID-19 vaccination after post-

consumption of social media content. Hassan and Hussein (2020) laid foundations of research to check users' trust in political regime through authenticity of social media content. Resultantly, they found that social media dependency had plunged in comparison to the obtained information from official websites. In addition to this, a study taken by Abida et. al. (2021) discovered that Pakistani traditional media was more of an entrusted source of information about COVID-19 than social media.

In persistence with Media Dependency's claim by DeFleur and Rokeach (1976) i.e., individuals acquire a space in their personal or social realm through media, few studies contributed assessing entertainment and digital gaming habits of individuals. Ali and Khan (2021) tracking individuals' social media usage for the sake of diversion and an effect on their academic life. Moreover, Nisar and Associate's primary emphasis was Pakistani youngsters and their amusement through social media dependency. On the other hand, Ahmed and Rehman (2021) investigated college students' social media dependency to discover how exposure to entertaining content affected their daily decision-making.

An onset of social media interactive platforms has proven to yield enough opportunities of self-revelation and freedom of opinion (Dijck, 2013) integrating a new objective dimension in classical framework of DeFleur and Rokeach's Media Dependency (1976) as mentioned by Yong-Chan (2016) in his research paper on the impact of SNS dependency on community development. Individuals are now able to voice their concerns and form a de-centralized system of communication with modern mediascape (Phillips, 2008). While peeping into the region of Pakistan, a pool of researches deal with young individuals' social media reliance to voice their opinions and self-depiction. Taking this in count, a study by Aftab and Associate (2020) concluded that unauthentic information about self on social media often stems from online portrayal. Likewise, Qureshi and Associate analyzed social media platforms and found Facebook, Instagram and Twitter to be great platforms among the rest in yielding avenues for engaging in self-revelation through sharing posts, pictures and videos. Ali and Javed (2022), on the other hand, stressed the importance of self-exposure and stated that social

media provided its users enormous potential chances to share their stories on a macro-scale (2022).

Certainly, with an integration into the routine lifestyles of Pakistani individuals, there's no room to believe less on its significance. However, its significance to the leading post-consumption impacts cannot be overlooked. Some of the key findings of various scholarships in the region are elaborated to understand the cognitive and behavioral implications of social media dependency.

A naturally curious individual is believed to glorify presence of media in his or her life. A tremendous tribute is paid to it as it brings about proximity regarding concepts beyond humanoid cognition to comprehend, otherwise. Batts and Herring (2013) argue that a provision of convenient content selection to individuals is exclusivity of this digital age. However, in opinion of Ashfaq (2021), no two individuals exhibit similar urges from the source. Meanwhile, an individual's involvement causing a reformed psyche has been in discourse by a number of earlier studies on social media (Berryman et al., 2018; Holland & Tarlow, 2007; Huang, 2020; Tandoc et al., 2015).

A large body of research debated the effects of social media usage on individuals' exposure (duration and intensity), level of contentment, unit of attention, sense of achievement, resilience, stress control, and constructed realities (Butler et al., 2002; Frison et al., 2016; Hawi et al., 2017; Wohn et al., 2015; Zhan et al., 2013). An essential component, user's mental health, is signaled by concerns over post-consumption of social media. Research across a wide range of areas is therefore flooded with information about social media usage and its effects on people's psychological health. The following might give a clue about these effects from various dimensions in the context of Pakistan:

From a lee of exposure (duration and intensity), a study by Hussain and Raza (2019) revealed that anxiety and stress were the two major effects associated with a prolonged social media usage. Analyzing the unit of attention, their contributions unveiled that users' showed symptoms of several neurological issues like short-term

memory loss and a challenged focus when in offline environment. Moving forward, to evaluate memory and retention, Rehman and Shah (2023) discovered that with prolonged social media usage, an information overload was responsible in enhancing complexity for relaxation paving another way for mental exhaustion. As for level of contentment, Iqbal and Malik (2023) observed social comparison of the sample finding a correlation between low self-esteem and regular social media usage. Gul and Naz (2021) peeped into the constructed realities of users as a result of post-consumption through social media. They found that women had a higher level of social media dependency as compared to their male counterparts, especially to pursue beauty affirmation through online contacts in order to adhere to social norms about charismatic traits.

One of the other post-consumption implications of social media is stress. Ahmad and Lodhi (2021) defines stress as a resulting influence that, when combined with a person's capacity for coping, has the same impact as all additional external stressors. In order to gain an insight into this particular dimensions, past scholars laid foundation of social cognitive theory in their work (Bandura, 2001; Borah, 2017; Caplan, 2007; Chung et al., 2020). As also discussed earlier in this chapter, some studies opted a widely used common terminology for a constant urge to remain engaged with social media i.e. Fear of Missing Out (FOMO) (Buglass et al., 2017; Liss et al., 2017; Murayama et al., 2013). Its earliest conception dates back to 1954 by Festinger. The concept was explored on students' personal wellbeing by Saeed and Shahid (2022) who found that their academic progress was poor as a consequence of a prolonged involvement with social media. Similarly, the results of Farooq and Hussain (2022) depicted a direct correlation of FOMO and a prolonged social media usage. Results by Rauf et al. from another study also showed a favorable association between psychological effects and FOMO (2023). Another study on social media dependency and stress levels in youth discovered a high frequency due to a virtual reality portrayal (Ijaz and Associate, 2021).

Contrary to stress, another post-consumption of social media dependency is resilience. Becker (2000) and Masten (2014) defines it as an individual's mental strength based on reversion to a physical and psychological coping mechanism at times of stress

or hardship. In their research, '*exploring the dual effects of social media on resilience: a study of Pakistani social media users*', Farhan and Associates found that social media might have both a good and negative impact on users' resilience. To maintain youth's capacity for resilience, the researchers stressed a need for a neutral social media consumption approach (2023).

The general well-being and happiness of individuals associated with their efforts and attainment are positively impacted by a significant emotional characteristic called sense of achievement. A study finding of Ali and Associates (2022) demonstrated a favorable correlation between social media dependency and personal development stemming from networking and educational goals. Relatively, peer-connectivity, planning, and helping oneself through social media platforms made individuals feel more accomplished of themselves (Malik and Associates, 2022).

Every individual is a part of a social structure in which interconnectedness shapes them into a web of mutual dependency. Action and presentation play a major role in such an alliance. Much of this association is formed through media as it binds individuals to a social knot (Ashfaq, 2021). It is noticed that literature highlights not just the adverse consequences of social media consumption but positive ideas about social connectivity and community development were also aided through social media. A variety of studies conducted in a domain of social media effects concluded a strong influence of collective actions for social welfare, volunteering, pursuits and traveling, and networking adhering common interests (Boulianne, 2015; Chen et al., 2016; Hughes et al., 2012; Vissers, 2014). In the context of Pakistan, some scholarships have made their mark on the platform of research arena.

Findings of Khan and Associates' study (2022), conducted to observe university students' pro-social behavior with their patterns of involvement with social media, demonstrated a positive symbiosis between moderate social media dependency and social activism. In contrast, intense social media consumptions formed a weak linkage between social enthusiasm in offline environment. Their findings were supported by Naeem et al.

(2021) who examined individuals' pro-social behavior in both offline and online environments. This was done to determine a true factor responsible behind group actions as a result of social media exposure. The results showed no variation from the earlier research findings; online social welfare engagement did not surpass offline participation. A likewise result was displayed in a study by Shah and Associates (2023), youth engagement in pro-social activities through social media: A Pakistani perspective; there was no clear correlation between a high social media dependency and users' pro-social behavior.

In classical definition of Wilson (2021), 'Giving of one's time and services with consent and without expectation of any compensation or reward is called volunteering. It promotes social networks and community involvement, and is seen as an essential part of civil society'. This argument holds merit because there are presently many options for individuals and organizations to connect and collaborate in order to produce significant societal outcomes. This is due to a continuous trend of accessible digital communication (Griffiths and Kuss, 2022). Ahmed and Associates (2021) represented a unifying power of volunteer-driven initiatives by social media following catastrophic events like floods and earthquakes. Moreover, signaling power of social media beyond boundaries, Javed and Associates (2022) argued that online social activism was outshined by offline volunteering. Similarly, Fatima and Associates (2022) unveiled the positive psychological outcomes after post-consumption of social media campaigns. On the other hand, another research showed that pro-social behavior also exhibited differences between genders; women were more likely to opt an online social work, while men, in general, were more likely interested in offline social events (Akhtar and Aslam, 2023).

From pro-social behavior rises a social urge of humanoid connectivity with the environment; most of the individuals skim through their social media platforms and engage in interesting leisure activities of visitations and travelling. Among social media platforms, YouTube, Facebook and Instagram rates a high estimate of frequent visitation for viewership, reading comments and fulfilling surveillance (Haenlein and Kaplan, 2021). An exploratory study by Abbas and Saleem (2021) noticed that Pakistanis bore no

different attitude in their engagement with social media when it came to adventure. A quantitative analysis on Pakistani youth from major cities by Khan and Associates (2022) demonstrated that their destination preference was in direct correlation with high social media dependency because they took help from popular hashtags instead of travel agents. However, social media dependency was also observed to produce an actual disengagement of users from the pleasures of their trip when consistently sent updates for seeking online social validations (Hassan and Associate, 2023). A relevant study by Ali and Associates (2023) discovered anxiety to be responsible in spoiling leisure moments during trips because of an impulsive control to upload. Moreover, as a guide for eco-friendliness, social media can be counted on since it encourages travelers for environmental welfare (Han and Xu, 2021). Also, repetitive visits to the sites and sharing updates for online social validation contributed in 'environmental degradation' (Qureshi and Associate, 2022). It was also discovered that women were more inclined than men to be motivated by trends on social media, underscoring a gender gap in views on visiting and travel. However, men outdid women in uploading updates moments on social media (Zafar et. al., 2023).

Another most significant attribute of pro-social behavior in forming connection with peers sharing common grounds of values and belief system. Once again, social networking sites have made it convenient beyond obstacles for users to find and connect with like-minded individuals. In return, individuals unite to play by doing collaborative projects, share ideas and support social causes they take interest in (Boyd and Ellison, 2021). However, the results of another study published in 2021 confirmed that despite productive crux of social media dependency to bring closer individuals with similar attitudes, virtual connections were increasingly surging on the cost of real social capital. Bibi and Associates (2023) examined gender behavior in connection to social networking using a survey study. The findings showed that although male students tended to concentrate on knowledge exchange, female students were more actively involved in academic interest groups on social media. Ali (2022) observed that a growing number of young professionals were using LinkedIn for networking and career advice. However, their total involvement in offline activities was constrained by social media dependency.

In the light of this review chapter, scholar proceeds in discussing a theoretical foundation of the current study in the next chapter.

CHAPTER 3

THEORETICAL FRAMEWORK

3.1 Overview

This chapter deals with the theoretical foundation needed to develop a conceptual model for the current doctoral dissertation. After reviewing the relevant literature, the researcher opted to set the foundation for this study with Media Dependency Theory (MDT). The theory as well as its application in the similar research domain are also discussed along with its relevance in the current study.

3.2 Introduction

While opting a scientific approach to resolve curiosity, a theory is believed to lay strong foundations in explaining a phenomenon. As Allman-Farinelli (2020) argues, this strong foundation is set after repeated validations through observations, testing and justifications for becoming a general notion. Also, a key element possessed by theory is to address a question of knowledge that ponders over in a mindset from multi-directional dynamics (Riva et. al., 2016).

Early theorists predicted media to be in sole power by some-how eliminating audiences' critical ability of evaluation and assessment regarding the content. It took long for research arena to shift its stance from purpose of the communicator to purpose of the receiver (Nawaz, 2006) by developing a debate focusing towards responsible content consumption by audience (Perry, 2004).

The present study is applied research, where scholar utilizes Media System Dependency Theory (MSDT) of mass communication as Media Dependency Theory (MDT) due to it being **media-centric** and **deterministic** by approach in explaining that people's needs stem dependence on media leading to certain cognitive, affective and behavioral outcomes (Windahl et al., 1986). However, this traditional theory is reformed to fit into the context of social media consumption by users.

3.3 Background

In one of the earliest studies Media System Dependency Theory (MSDT) known as media power theory, is stated to have sufficed the identified gaps in **audience-centric** and **voluntaristic** Uses and Gratification Theory (U>) that stated audiences' activeness in compliance with their choice of content (Corison, 1982; Saalbach, 1980; Tseng, 2013; Zhao, 1987). Media System Dependency Theory (MSDT) took its complete formation in more than three decades of time-span (Riffe et. al., 2008). Mass communication research arena is believed to have had a theoretical transition during early 1970s when the previous studies of 1960s focused more on propagandist campaigns instead of focusing on the ecological analysis of media effects. When those investigative studies on media usage and outcomes didn't prove to be sufficiently explanatory (Mansell, 2004), MSDT's crux was borrowed from sociology terming it as an ecological idea due to several processes going on in each component of the system (Kintsfather and Skumanich, 1998).

3.4 Theoretical Concept

Traces of the theory can be found earlier when philosophical approach of audience activity became debatable on ‘why people turn to media?’ instead of ‘what media do to people?’ (Bernard, 1949a; Fiske and Wolfe, 1949b; Lazarsfeld and Stanton, 1942; Robert, 1940; Warner and Henry, 1948). The origin of MDT laid its foundation on numerous theories with specific emphasis to Emerson’s power dependence theory (1972). Emerson's theory offered relational interpretations of power, suggesting that the degree to which A possesses resources that B need to achieve its objectives determines the degree of control A has over B. MDT was expanded over Emerson's theory, which was initially designed for interpersonal communication, to include relationships between participants in media contexts (Kim, 2020). It was assumed that since individuals lacked major prospects of learning from peers and experiences, media was their sole guide to the world (Kemper, 2014). The evolution of theory took three facets as below:

The inception took place when the very first theoretical conception of MSDT as MDT came into origin after when Ball-Rokeach released her first paper of the series entitled, ‘The information perspective’ to unfold how media-controlled flow of information within a societal framework causing certain effects (1974). It was argued, ‘the more media is able to fulfil audience’s need, the more it becomes capably important to the audience’. Hence, the first proclamation by Rokeach and DeFleur (1976) presented (i) media as an absolute necessity in a society.

Also, media was believed to be a persuasive information source to the people who had different goals to achieve (Rokeach and Associates, 1990). The articulated goal areas, driving a strong dependence on media, were presented during the first conception as understanding (surveillance), orientation (social utility) and play (fantasy-escape). An emphasis on first asserted people to thrive for knowledge about world and self through media as a guide. Second to it paved an emphasis on how people related themselves to their social surrounding with a help of media. The last one marked significance because of how people aligned themselves with self and others in the form of their actions, thinking patterns and socialization.

The pioneer also stated that with gratification of goals came the consequences such as cognitive, affective and behavioral (Rahim, 2003). To her the cognitive implications of post-consumption addressed audiences' referring to mass media when their needs to surveillance met incompetency with other external factors. In order to resolve this ambiguity of theirs, people were left with no other option but to put a profound reliance on media as a source of learning. Followed by post-consumption, affective implications on audience were determinant of their emotional responses to a portion of knowledge acquired. This was a reflexive of desensitization or a thorough attentiveness. Third to last identified by Rokeach was behavioral leading through actions carried out by individuals' post-consumption of media either by one of the two variants of **activation** and **deactivation**.

The theory underwent refinement when it advanced during 1980s. The second comprehension of the theory as MSDT stated that (ii) society, organizations and media were all inter-dependent upon each other for attainment of goals and resources forming a symbiotic/reciprocal relationship in return (Merskin, 1999; Rokeach, 1998; Waring, 1996). Defleur and Rokeach's main observation in this span was around political candidates who relied heavily on media to convince public about efficacy of their candidacy. They also note that advanced societies with sophisticated media outlets yielded better opportunities for their public to rely on them for information.

The consequences like cognitive, affective and behavioral following post-consumption of media took a new dimension from the refined version of MSDT placing cognitive impacts as a communal learnt system standardized by media, affective impacts as inclining people towards desensitization, alienation or a unity for a social cause, and behavioral impacts enforcing a state of action in people to react either in accord to or in contrary to learnt attributes through media (Widaya et. al., 2020). From onwards the theory was applied by several researchers to ascertain its reliability.

The definitive image of the theory came into existence when the third and the final comprehension of the theory as MSDT bears consensus with Littlejohn (2002) as an excerpt from his book reads, ‘the second source of dependency is social stability’. From here the theory fitted well with a notion that (iii) society is more inclined towards media during times of uncertainty (Andrew and Deanna, 2003). Not to mention an intensity of dependence is directly relational to a level of uncertainty in the surroundings (Avery, 2010; Ball et al., 1986; Coyle and Hindman, 1999; Lowrey, 2004). One of such examples of an uncertainty is often observable during times of election or crisis. An aftermath, following an end of uncertainty, leads to a decrease level of media dependency (Melvin and Sandra, 1976).

As for conceptual functionality, this theory functions in a two-step mechanism: during a period of transition when people’s need to surveillance increases upon media, more likely they are to get impacted by the content (Matthew, 2008). Likewise, an extent by which audience depend upon media re-shapes media institutions to serve a central role for meeting those dependencies yielding estimate of an effect. But, no two members of the system exhibits same patterns of dependence and media influence (Dennis and Stanley, 2015). Moreover, this conviction that media plays a vital role of information dispersal strengthens its position as a central processing unit in the society (Yasui et. al., 2014). MDT also differs in its approach from previous effect-trend studies by post-positivist researchers who had stated that media could influence individuals without their consent.

From epistemological perspective, Media System Dependency Theory (MSDT), in its nature of enhancing power with the social exchange, began fitting itself somewhere in between the stronger effects model of mass communication, i.e. magic bullet theory, cultivation theory, spiral of silence, agenda setting, and limited effects model of mass communication, i.e. two-step flow of information, uses and gratification theory during 1990s when scholars began to observe media’s role in public opinions and social perceptions about self and the surroundings (Grant and Guthrie, 1991; Littlejohn, 2009; Lowery, 1988; McQuail, 2010).

The theory disperses strength as well as weakness; An adequacy of this theory is its nature of being descriptive and explanative at how media acts as a system itself to bind with other social and individual forces in a society at both peace and critical times (Ognyanova et al., 2012). As Jafar and Zahra (2018) debates, ‘from hypodermic needle to agenda setting effect of media, people’s perception and actions are likely to reflect media content’, the theory incorporates **both micro and macro system exchange of information** (Souza et al., 2016) meaning that it is combined with several perspectives like psycho analytics & social system theory, systematic & casual approach and base elements from Uses and Gratification Theory (U>), however it is minimal when focused on effects; being a theory of media power, it has not been revised much to determine under what circumstances does a media influence leave **long-term** imprints. Upon this the theory can be regarded as ‘seasonally affective’

3.5 Empirical Implication of the Theory

More than thirty years since its origin, founder as well as other researchers conducted a framework of studies to imply the theory on different scales (Meshkin, 1999) because audience or media alone were not sufficient to understand post-consumption effects (Rokeach, 1998). Any theory, according to Haack’s book, defending science – within reason (2005), isn’t intended to be proven right or wrong. A sound theory develops and modifies throughout time in response to feedback from its users. MSDT, however, remained empirically difficult to verify from a perspective of effects (Dennis and Stanley, 2015).

3.5.1 Individualistic/Personal scale

At **micro-level** the theory emphasizes upon goal-oriented individuals’ connection with certain media genres resulting into certain outcomes (Young, 2017), and has been

termed as Individual Media Dependency (IMD) at this level of audience dependence due to factors of arousal and motivation (Islam et al., 2019; Yoonwhan, 2009). In words of Rokeach (1998): “IMD is a degree by which the accomplishment of an individuals’ goals depends on their ability to access the media system’s information resources, as opposed to the degree by which the accomplishment of media system goals depends on the resources under individuals’ control.” It is believed that audiences are likely to be affected by media if their active cognitive processes incline them towards what to choose from a content. As discussed, the goals with which people turn to media are (1) understanding, (2) orientation, and (3) play. Ball and Loges (1993) in their survey found understanding (social integrative need) and orientation (integrative need) the two main persuasive reasons behind newspaper reading. Ball and Associates (1984) formed an experimental television series ‘*The Great American Values Test*’ to study media outcomes on audience. Results showed a significant impact on people’s cognitive patterns while understanding (social integrative need) and orientation (integrative need) were the driving factors in tele-content consumption. Some of the past studies also depicted media exposure to be a determinant of media dependency (Miller and Reese, 1982; Wanta and Hu, 1994). Grant, Guthrie, and Rokeach (1991), for instance, discovered that dependency on television raised the amount of broadcast exposure. Many modern researchers still imply the traditional version of MDT as Individual Media Dependency (IMD) till date by measuring it through temporal dimension (duration and frequency of time with which an individual remains involved). Some researchers have also unveiled the cognitive influences as a result of IMD (Becker et. al., 2001; Boomgaarden, 2011; Li and Lin, 2018). Similarly, IMD has remained in observation by some scholars to be a determinant of affective outcomes (Jung and Rokeach, 2004; Lagoe and Associate, 2013). Behavior following post-consumption of media content has also been a point of discourse for many scholars aiming to study it from varying dimensions (Kim et al., 2019; Mafé & Blas, 2006; Rokeach et al., 1984). The present study also focuses on individualistic scale of MDT in two ways; dependence and effects.

3.5.2 Collectivistic/Interpersonal Scale

Ojaka and Associates (2014) argued that at **meso-level**, a reciprocal junction is formed between both traditional or modern media, audiences, organizations and the society. Such an implication of MSDT is observed during times of natural or man-made crisis (Liu, 2019); Ball with Hirschburg and Associates (1986) found that viewers' dependence on broadcast media enhanced during volcanic eruption at Mount St. Helens in 1980. Also, the scholars explored audiences' preference and reliance on media with a different perspective; the theoretical implication was looked from another aspect of including the 'digital divide' in a post-9/11 study where netizens were believed to have surged their usage of internet for being staying up-to-dated with the information meanwhile those not so frequent users of internet showed lesser usage of the medium (Kim and Associate, 2004)

3.5.3 Socialistic/Societal Scale

Ahead advancements in the theory led to a formation of Media System Dependency (MSD) where media effects were put into consideration on a large-scale. It is a combination of several perspectives like psycho analytics & social system. It deals with how power is disseminated in the communication system. From a **macro-level** aspect, the theoretical implications find their imprints in studying attitudinal and behavioral formation conceding with that of the system. It might not be adequate to state that the theory is studied through a lens of power-dependence relationship. The subjugation by the lesser powerful and dominance of the more powerful often forms power inequalities in relation of exchange (Blau, 1964). Most of the researches have dealt with audience's perception of politics within a democratic political regime. However, a study by Halpern (1994) argued that people's credibility on media differed in an authoritative political regime than in a democratic political regime; the findings of their study validated that people's media dependency could differ as per external attributes. A study by Sun and Tai (2007) after an outburst of SARS in China during 2003, discovered that public, believing the information being provided to them was through governmental gate-keeping, turned to sources of information apart from media i.e. short message services and online interactive platforms.

As per expanding mediascape in relevance to digitization in the twenty first century, the fundamental theory needed certain addressing (John and Thompson, 1995). For this purpose, contributions of scholars like Haridakis and Associates (2008), Kim and Jung (2017), Kimet and Associates (2019), and Lee (2012) are worth mentioning.

From an above reviewed literature in theoretical context of Media System Dependency (MSD) and summarizing various scholarships above, it can be concluded that it empowers media, as a system itself, to uphold the existing forces blended within all micro, meso and macro levels of operationalization. Furthermore, MSD remains valid and continues to evolve in the paradigm of digital communication (Jung and Rokeach, 2004). Below, the scholar has briefly looked at its relevance with the modern mediascape.

3.6 Observations in the Context of Modern Media

The theory took another fold after an emergence of internet during 2000s when a terminology of individuals shifted from audiences to users. Resultantly, this gave another course to researchers for cross examining media dependency from both traditional and new media. One of the initial study conducted by Dans (2000) argued that digital technology was a threat posed against print media. However, a survey analysis of approximately 1000 Dutch adults by De Waal and Associates (2005) concluded that there wasn't any significant difference between the time duration people utilized to rely on online information channels and the newspapers as both were thought to be better appropriate for all types of content. These study findings were somewhat an actual sequel to the study findings of Chyi and Associates (2002) who revealed that digital and traditional media was preferred with a similar ratio to attain information. While new media displaced traditional media, another important research by Kaye and Associates (2003) found that audiences were solely turning into users. Nonetheless, the amount of time spent on political efficacy did not differ between individuals from the year 2000 and those from the year 1996.

An extension of MDT from a lens of Rokeach and Ognyanova's study (2015) stated that people's dependency on new media was positively influenced by the three factors i.e. social communication, effectiveness, and reliability. Another smaller-scale cross-sectional survey, based at a large mid-western university of United States, on new media dependency and individuals' reliance on the internet observed how the digital scape contributed in influencing their buying, communicative and surveillance behavior. The study findings demonstrated that the primary causes of new media dependency were factors that affected customers' actions and preferences, such as perceived utility, convenience, and the ability to connect with like-minded individuals. However, goals behind new media usage included surveillance more than social connectivity (Patwardhan and Yang, 2003).

From this time forth, virtual communities led forward attainment of several cognitive, attitudinal and behavioral needs which otherwise could not have been gratified. Due to its instant reach, technological necessity in the form of mobile phones, and being a fifth important pillar of warfare in a system (Singer, 2018), social media led to an endless intense exposure. Till date, scholars have explored motives behind individuals' inclination towards social media usage. Much of the revealed motives sought social compensation for lack of social and psychological variables in an offline environment of those individuals (Brown and Yang, 2013; Lee and Park, 2014; Sheldon, 2008). Within the framework of Media Dependency Theory (MDT), social media dependency relates to an individual's urge of gaining an insight about everything he/she desires, to feel a sense of amusement and to avail an opportunity to get connected with others via virtual means (Kim and Jung, 2017). It might not be incorrect to state that without reliance on modern technology, people's sense of existence raises a question mark (Ullah, 2013). Relatively, a degree to such an association with social media is a shaper of users' perception, attitude and behavior. Heavy users manifest amplified effects, that aid in influencing their pro-social habits or even affecting their mental health (Nabi et al., 2009; Valkenburg, 2016).

Considering the year of global pandemic COVID-19, interactive platforms were believed to have played a major role of an information source to the users

(Dyer and Gottlieb, 2020). In the context of social media, MDT was applied to investigate problems like digital misinformation (Wang et al., 2021; Zarocostas, 2020) media literacy, users' involvement, and post-consumption outcomes during the sudden and unpredictable viral outburst with risks alongside producing a public havoc requiring strict strategies for precautions. It had inclined a tilt in media dependency reshaping it into New Media Dependency after when public was observed to be skimming through instant news sources for knowledge acquisition related to the virus. Following the global health hazard, many researchers aimed to investigate authenticity of the information provided by media from varying dynamics. Amongst them, Hassan and Hussein (2020) explored media's authenticity with that of audience's trust in the political regime. The findings of their study exposed social media to be an unreliable source of information dispersion as compared news websites. In contrary to the study findings, another study by Kasirye (2021) bore consensus with Kryvasheyev et al. (2015) in stating that new media was efficient in resolving conflicts under complicated conditions. The findings revealed that as compared to traditional media, the social media platforms were the most effective communication tools in large-scale crisis because of their instant reach to inform about danger and recovery measures. Another important aspect found in the literature in terms of media dependency during COVID-19 crisis was the varying motives of the audiences in content consumption. A cross-sectional survey across three different countries United States, Thailand, and Croatia showed that national ethnicity was influential in determining people's choice of media content. Bearing individualistic tendencies, Americans' motive behind media usage was understanding as compared to other goals while rest of the country natives relied on media for *play* on the basis of their collectivistic tendencies (Pavica, 2021).

3.7 Rationality with the Current Study

The current study embraces the same model of Media System Dependency Theory (MSDT) by narrowing it down to a **micro-level** engagement of users with media for attaining cognitive, affective, personal, integrative and escapism goals. Subsequently, the effects taken in count for observation are first and the last from structured outcomes of cognitive, affective and behavioral. In depth, the following might give an elaboration to why and how the current theory fits well within the parenthesis of current research:

First of all, this theory fits well in the context of effectiveness beyond concrete boundaries. As discussed above, the traditional theory states that audience get associated with media because there lies a requirement to gratify certain goal areas. The intensity of such a connection with media inflicts stronger influence on audiences' beliefs, attitude, and their ways of action resulting into a rise of a new and changed environment. It might not be inadequate to relate the theory with the digital landscape of communicative powers created by social media. Ever since a rise of smartphone usage the younger population around the world and its adaption to the evolving technology has embarked certain concerns for scholars to unveil its post-consumption menaces on youth's physical and mental well-being. Several scales have been developed by researchers to measure the impacts of prolonged social media usage (Andreassen et al., 2016b; Cheever, 2013; O'Brien and Toms, 2008; Orosz et al., 2016a; Steinfield et al., 2007; Yu, 2015). An inactive physical activity and constant commitment with social media for longer durations have found its paw-prints with reduced sports or walking, unhealthy cardiac health, obesity, laziness, disturbed sleep patterns, postural problems and musculoskeletal issues, digital eye syndrome (Lin et al., 2016). Not to mention, the exposure deposited in young cognitive arrays is often associated with their apparent image during action and reaction; abnormal behavior associated with intense social media involvement is often termed as 'addiction' or 'problematic usage' as per psychology dictionary. McCrae (2018) argues that youngsters involved in self-disclosure (Hawk et al., 2019) on social media bore narcissistic personality traits.

Secondly, this theory fits well in integrating micro and macro level of influences. The classical literature states Media System Dependency Theory (MSDT) to assist

individuals in getting tied with their environment; media bridges such a gap and plays the role of a mediator. In modern era of social media, the concept is well relatable due to users' day-to-day mingling with the virtual platforms to an extent that they influence their self-imaginary, social connectivity, information consumption, as well as daily decisions by suggesting certain services or yielding several opportunities for growth in the present and future. One of the latest studies on adolescents discovered that with social media usage, they were able to build connections, exchange information, and could even gain a prominent place amongst their peers (Saleh, 2024). Another study in the context of self-disclosure on social media by Hogan (2010) revealed that users find it challenging to maintain a similar identity for distinctive online environments. Barker and Rodriguez (2019) studied self-disclosure through social media dependency and argued that an intensity with which African Americans posed for selfies represented their racial identities. Their study also concluded that a need to self-disclosure was an outcome of positive social and political activism.

Third relates to its nature of bearing cognitive and affective proportions. The audiences' need of gratification from media cannot be subsided from their social positioning in a societal sphere. However, the traditional theory also poses an occurrence of certain outcomes as a result of this involvement with media as a source of learning. Now within the digital domains, social media has vividly allowed users to experience understanding, orientation, play and expression apart from routine patterns of content intake. This further allows a likelihood of strong cognitive and affective impacts to take birth in an individual's mindset (Shrier et al., 2012). Users form an instant but subconscious knot with social media that subsequently contributes to knowledge acquisition about vague ideas, perception of reality and information retention. With this digital incorporation into their daily lives they are now able to exhibit certain emotional responses of sensitivity or desensitization via diverse means as a result of prolonged involvement (Walker and Associate, 2021). Due to this, social media algorithms are designed to censor sensitive content for viewing to prevent shock to the users (Mills et al., 2022). A study on Facebook and Twitter by Chae and Associate discovered an element of tolerance in users for consuming the disturbing content giving rise to a not so concerned society (2020).

Also, as a tool of amusement, social media best regulates mood of users in a way better than traditional media could ever have had (Reinecke, 2017; Vorderer et al., 2004). Nevertheless, the dependence gap is ever titling as the boundaries between these two media types get more obscure. Henceforth, Media Dependency Theory provides an excellent justification to mediologists who aim to evaluate individual's cognitive and affective patterns associated with post-consumption of social media content.

Last but not least comes a consideration of the behavioral repercussions of this theory. What sets apart this post-consumption entity from the first two is its nature of being patent. The traditional theory addresses media to be reflective in actions of individuals as per their exposure to the content by direct or indirect means (Hung and Zhang, 2018). An intense exposure bears possibility of a highly affected behavior meanwhile a moderate to lower suggests minimal intensities. In current digital mediascape, smartphone technology has yielded endless possibilities to remain connected with social media for prolonged hours. Some scholars have given specific emphasis upon how individuals perform followed by post-consumption of social media content. According to a study by Kastanakis and Mylonas (2019), users frequently engage in social comparison and either boost or injure their self-esteem following the consumption of entertainment content on social media platforms. Subsequently, it impacts users' post-consumption actions, which could include following a social trend or online self-disclosure. The theory fits well to study social media effects on individuals' performance in reference to the duration and intensity of their involvement with the digital platforms. Not to mention, the performance encapsulates users' motivations, habituation or conformity of lifestyles.

3.8 Literature Gap

Existing social media research has primarily focused on a direct relationship between social media usage and psychological or social consequences. Although such research has produced useful insights into online usage patterns and effects, it has mainly ignored the intermediating function of social media dependency, particularly the dependent goals that motivate and sustain users' involvement. This depicts a significant gap in the current scholarship as social media dependency is not just an outcome of social media usage but is also a process capable of influencing the strength and direction of its implications. Past studies which do not account for this mediating construct risk providing an incomplete understanding of how social media usage translates into cognitive and behavioral effects. Addressing this gap, the present study views social media dependency as a critical intermediary between usage and outcomes, broadening the analytical scope of Media System Dependency Theory and providing a more complete understanding of user behavior and its cognitive-behavioral consequences in the Pakistani socio-cultural context.

3.9. Research Questions

The first research query was generated concerning social media consumption and gender:

RQ1: Do male and female respondents differ from each other in terms of *Social Media Usage (Temporal Dimensions, Involvement Patterns)*, and *Social Media Dependency (Understanding, Orientation, Play, Expression)*?

The second research query was generated concerning social media exposure duration and involvement styles:

RQ2: Is there any relationship between the subsets of *Social Media Usage (Temporal Dimensions and Involvement Patterns)*?

The third research query was generated concerning an interlinkage between duration of social media consumption with goals and goals with its subsets:

RQ3: To what extent, *Social Media Usage (Temporal Dimensions)* correlates with *Social Media Dependency (Understanding, Orientation, Play, Expression)*?

The fourth research query was generated concerning an interlinkage between social media involvement styles with goals and goals with its subsets:

RQ4: To what extent, *Social Media Usage (Involvement Patterns)* correlates with *Social Media Dependency (Understanding, Orientation, Play, Expression)*?

The fifth research query was generated concerning an interlinkage between social media involvement styles with post-consumption implications (mental outcomes and social interconnectivity):

RQ5: To what extent *Social Media Usage (Involvement Patterns)* correlates with *Social Media Effects (Psychological Impacts and Pro-Social Behavior)*?

3.10. Research Hypotheses

In light of the above scholarship and understanding, the traditional theory of *Media Dependency* well-addresses the problem statement of the current doctoral study that was to explore a correlation between social media consumption, an attainment of social and psychological needs, and the implications on users' cognition and behavior. Henceforth, the researcher had hypothesized the following:

H1 - The *Social Media Usage (Patterns)* better predict *Social Media Dependency (Understanding, Orientation, Play, Expression)* as compared

to *Social Media Usage (Temporal Dimensions)*.

H2 - The *Social Media Usage (Patterns)* predict *Social Media Effects (Pro-Social Behavior)* as compared to *Social Media Usage (Temporal Dimensions)*.

H3 - The *Social Media Usage (Patterns)* predict *Social Media Effects (Psychological Impacts)* as compared to *Social Media Usage (Temporal Dimensions)*.

H4 - The *Social Media Effects (Pro-Social Behavior)* are better predicted by the extent of *Social Media Dependency* as compared to *Social Media Usage (Temporal Dimensions)* or the demographic information.

H5 - The *Social Media Effects (Psychological Impacts)* are better predicted by the extent of *Social Media Dependency* as compared to the *Social Media Usage (Temporal Dimensions)* or the demographic information.

H6 - *Social Media Dependency* mediates the *Social Media Effects (Psychological Impacts)* of the *Social Media Usage (Temporal Dimensions and Patterns)*.

H7 - *Social Media Dependency* mediates the *Social Media Effects (Pro-Social Behavior)* of the *Social Media Usage (Temporal Dimensions and Patterns)*.

CHAPTER-4

METHODOLOGY

4.1 Introduction

This chapter comprises key definitions of the core concepts of the study, i.e., (i) the duration and frequency by which individuals associate with social media (Temporal use of social media) (ii) having specific involvement styles (Use patterns) (iii) and how this is intermediated by their dependency goals (Social media dependency) (iv) to produce certain effects after content consumption (Social media effects). Relatively, this chapter discusses operationalization of the above-mentioned parameters, the incorporated instrumentation to measure variables of interest, sample frame and survey technique

4.2 Survey Method

The survey technique has proven to be highly effective in the social sciences when examining the attitudes, behaviors, and perceptions of various groups. To address the research questions examining the relationship between social media dependency and its implications, a quantitative survey design was adopted. This approach was considered appropriate because it allows for the systematic collection of data from a large number of respondents, facilitating statistical analysis and generalization (Bryman, 2012; Creswell,

2014). The survey method aligns directly with the study's objective of testing associations between variables such as usage intensity, dependency goals, and the outcomes.

A questionnaire based on the key variables in the study was distributed among the students of two universities in Islamabad, Bahria University Islamabad Campus (BUIC) and Quaid-i-Azam University (QAU) for data collection. Students from various parts of Pakistan are enrolled in these universities and hence it provides a good opportunity to examine the differences in usage, social media dependency and effects on youth from different socio-economic background.

4.3. Sampling Technique and Sample Frame

To acquire a representative sample, the researcher initiated random sampling of all the public and private universities in Islamabad and then finally chose Bahria University Islamabad Campus and Quaid-i-Azam University. Following this, comprehensive listings of all the departments from both universities was executed. A systematic sampling technique was employed to select 10 (5+5) departments from both the universities. From Quaid-i-Azam University (QAU), the departments of Environmental Sciences, Computer Sciences, Economics, Management Sciences, and Sociology were included. Similarly, from Bahria University Islamabad (BUI), the departments of Business Administration, Management Studies, International Relations, Professional Psychology, and Computer Sciences were selected. Prior to the selection process, *Slovin's formula* was applied to determine the required sample size, where n represents the sample size, N the total population, and e the margin of error expressed as a decimal. The formula is expressed as:

$$n = \frac{N}{1 + N(e^2)}$$

This approach ensured that an appropriate and statistically reliable number of participants was identified from the study population.

Later through systematic sampling technique, the respondents were chosen on the basis of their roll number. That made total 19 graduate and 19 postgraduate students, yielding 38 participants per department. An established list of pupils made a total sample frame of 380.

Table 1 Participant Demographics

Category	Details
Total Participants	380
Institutions Represented	2
Academic Year	2022-2023
Sampling Technique	Random and Systematic
Departments Covered	5 each
Students per Department	38 (19 + 19)
Distribution by Academic Level	Graduate and Post-Graduate
Data Collection Method	Questionnaires distributed and manually collected by the researcher
Data Cleaning	Some questionnaires were discarded due to incomplete or improperly filled information

4.4. Variable: Conceptual/Operational definitions

4.4.1. Independent Variable

It is worth mentioning that demography, as a process, explained by the National Geographic Society (2022) defines it as gathering information through direct and indirect strategies by surveying smaller groups within a vast population. These samples are then utilized for drawing inferences with the whole population. The previous mass media studies dealing with effects in the research arena nominated traditional/new media exposure as an independent variable (McLeod, 1991; Oliver, 2008). For the present doctoral study, the identity of sample concerning age and gender alongside duration, frequency and styles of involvement with social media content were considered as independent (demographic/moderating) variables.

- I. **Age:** The age groups for both the genders selected for the research survey in this study were categorized into groups as Group 1 (18-20 years), Group 2 (21-23 years), Group 3, (24-26 years), and Group 4 (27-30 years).
- II. **Temporal Usage of social media:** The Temporal Usage, categorized into (a) Use History and (b) Use Time, was kept as an independent variable as it was a determinant of the intensity of the dependent variable. Also, the value of the Temporal Usage remains constant or fluctuates irrespective of the changing parameters in the other two variables of the study.

For operationalizing these Temporal Usage, 2 closed-ended questions were developed for the questionnaire considering the levels of involvement through a 5-point Likert scale ranging from 1 as “Never” to 5 as “Always”.

(a) Use History

This subset of first independent variable particularly conceptualizes a user’s chronological involvement with social media. Its significance in the operationalization cannot be subsided due to provision of a profound insight into the evolving radiations of post-consumption.

Operationalization: Adapted from the style of Use Frequency scale of Lee and Perry (2004), a question was developed by the researcher to determine respondents' duration of social media usage from a yearly perspective: "How long have you been using social media?".

(b) Usage Time

The conceptualization of this second subset of independent variable was earlier investigated by Ball-Rokeach and DeFleur (1976), and later by W. Loges and Jung (2001). Usage Time is a comprehension of how much time do individuals invest in consuming media or to get engaged in a specific activity. Ball-Rokeach and colleague argued that high levels of media usage time could greatly influence audience perceptions and behavior. It was typically measured in terms of hours or minutes spent on a particular medium or activity within a specified period (e.g., daily, weekly). Loges and colleague extended this concept to internet usage, exploring how the amount of time spent online impacted individuals' perceptions and social behaviors. Their research indicated that extended internet use could significantly affect users' social interactions, information-seeking behaviors, and overall lifestyle. In summary, these literary foundations were a critical factor for the researcher to understand respondent's behavior and media effects underscoring how the duration of media exposure can impact various aspects of his/her personal and social life.

Operationalization: For the present study, a question was posed to determine respondents' daily involvement with social media: "On average, how many hours per day do you spend on social media platforms?"

III. Involvement Patterns of social media: The researcher in the present research categorized media use into varying patterns like habitual, purposeful and contributory opted by audience for media use in observation to the past relevant

literature. These studies are explanatory in the context of traditional, new and social media. A wide scholarship was detailed in the chapter of literature review; In 1986, Rubin and Windahl identified Audience Use Patterns within the framework of the Uses and Gratifications theory. These are in fact unique communicative interactions in particular reference to an engagement with new media observed by Yoonwhan Cho in his study of 2009. It states, that engagement with media is a voluntary act that paves a significant comprehension of an individual's attitude to behave in a certain way after cognition (information processing). Moreso, these patterns aid in deriving personal motivation and interest in specific consumption of media (Rubin et al., 1994). According to a research by Smock and associations (2011), social media's interactive and participatory features which let users co-create content, have discourses, and get quick feedbacks, often contribute to social media dependency and encourage greater levels of involvement. It is worth noting that less or minimal involvement with media content is not likely to last longer in an individual's cognition and hence the influence does not leave its imprints in depth. In light of this understanding, an individual's involvement with social media is categorized from a lower to a higher range and into (a) Ritualized Use, (b) Instrumental Use, and (c) Participatory Use. The researcher in the present study utilizes the same in association with social media to assess involvement patterns of users with that of mediating and dependent variables.

For operationalizing these patterns, 7 closed-ended questions (two, two, and three for each sub-variable) were developed for the questionnaire considering the levels of involvement through a 5-point Likert scale ranging from 1 as "Never" to 5 as "Always".

(a) Ritualized Use

Some researchers critically evaluated audience and their connection with media as per habit (Rubin and Windahl, 1986). It might not be inadequate to state that those audiences had no specific purpose behind media use. Their usage was either based on

leisure time or just random surfing. Therefore, researcher conceptualized a first sub-variable of Media Use as a category of habituation if an individual's involvement with the medium is devoid of purposefulness. In the context of digital mediascape, it can be referred to as a behavior portrayed by user who clicks whatever conquers his/her sight or when he/she skims through the content without some thoughtful attention.

Operationalization: For Ritualized Use, two questions were posed i.e. 'Do you view whatever interests you and gets your attention?' and 'Do you use social media out of habit instead of looking particularly for the content?'

(b) Instrumental Use

Secondly, the literature embarks a critical observation on audience and how they related with media in terms of media use for some kind of an intention (Rubin and Windahl, 1986). These audiences were seen to have associated with media content to resolve either a query or to perform an action based on their observation from media. Therefore, researcher conceptualized a second sub-variable of Media Use as a category of behaviour where a respondent is inclined to skim through the content deliberately. In the context of digital mediascape, it can be referred to as a behavior portrayed by user when he/she purposely selects and invests time on a content of interest.

Operationalization: Two queries were posed for Instrumental Use, i.e. 'Do you skim through your news feed only to check what's happening latest?' and 'Do you search any content by simply typing a specific keyword? (active search)'.

(c) Participatory Use

This third to the domain is important yet more significantly known in the context of new media since before audiences couldn't avail an opportunity for a two-way flow of information. Technological advancements are believed to have changed the mediascape bringing more facilities of networking and information exchange. This exchange of content is believed to bring about a persist reliance on media termed as 'dependency'. Therefore, researcher conceptualized a third sub-variable of Media Use as a category of behaviour newer as compared to the above two. This pattern allows media content consumers to become media content sellers by producing content and dispersing it for others to view/utilize and becoming active in commenting and yielding feedback (Sven Windahl et. al., in their book titled, using communication theory: an introduction to planned communication, 1992; Miller, 2005). A similar idea was put forward as 'participatory culture' by Henry Jenkins (2006), where modernized gateways of new media, particularly social media, allowed users to produce and disseminate content alongside shaping understanding of others by a broader range of opinions.

Operationalization: For Participatory Use, considering it as an exclusive entity in Usage Patterns, the three different questions were developed to assess a respondent's behavior from varying aspects i.e. 'As for your role, do you view, comment, or write feedback (e.g. on different posts, statuses, or tweets) on social media?', 'Do you share the content on your timeline or profile for others to view?' and 'Do you use social media to socialize with others in an offline environment of yours?'

4.4.2. Mediating Variable

A mediating variable elucidates the process by which an independent variable exerts its impact on a dependent variable. In accord with this logic, the researcher intended to determine social media dependence, and its integration with the effects of those patterns with the vast population of observation. The conceptualization and operationalization of the variable is stated as below:

IV. Dependency

Classical conceptualization: In accord with sociologists and their belief, the basic instinct of human race survival is believed to have existed after comprehending the environment around them. The possibility of this occurred while individuals learned and developed into social and emotional beings. The process has eased by the digital age of time. Media has given enough chances to disperse information and uphold meanings across boundaries people couldn't have imagined, otherwise. Although convenient, the process itself is a cognitive troll in developing understanding. American Psychological Association (2023) defines understanding as, 'gaining insight about oneself or others or of comprehending the meaning or significance of something, such as a word, concept, argument, or event'. Relatively the notion can be classified into two forms of interpretations and play.

Theoretical foundation for conceptualization: Some scales utilized in this study were linked to the classical theoretical framework guiding the inquiry in observation. The early media system dependency theory of 1976, explained dependency as an internal force by which individuals, media, and social systems are all integrated. The focus of the current study remains on the foundation of individual media dependency. Although, traditional media still bears significance, new media, particularly social media is a trend-revolting factor for individuals. Due to the changing mediascape, the **audience** has now turned merely to **users** modifying the concept of Media Dependency into SNS Dependency by some scholars (Holland, 2019; Marino, 2018; R. J. Lee, Moore, Park, & Park, 2012; Kim, 2011).

Concept as a mediator: It's important to note that media dependency is not linked to uncontrollable media use or addiction. It is more of a contact people make with media on a daily basis for fulfilling their goal areas. This in return boosts media's ability to influence them on the basis of cognitive, affective and behavioral parameters (Ball-Rokeach, 1998). In traditional model of individual media

dependency (IMD), there lies an interlinkage between predictors and outcomes. As a result, based on the area of research, media dependency could either be dependent or an independent variable. Moreover, within a realm of social media research, reliance, also known as Social Media Dependency, can act as a mediator between many factors that precede it, such as social requirements or incentives for usage, and the effects as a result. Kraut (1998) examined the relationship between internet usage and psychological well-being, taking into account the role of reliance (dependency) as a mediator. Ross et. al. (2012) held an opinion that media effects could not be measured without a presence of a relationship between the other variables. Henceforth, media dependency is often believed to be a descendent of media use. Research arena has indicated that media effects are mostly brought about by media dependency, which is also fluctuated by frequent media exposure (Hao et al., 2014). Pontes (2018) also discovered that the connection between specific personality traits, such as neuroticism, and mental health problems like anxiety and depression is influenced by a reliance on social media. Likewise, Hou (2019) examined the role of social media dependency in connecting social anxiety and problematic smartphone use. Results of his study indicated that more internet usage resulted in a higher reliance on social media, which subsequently had a detrimental effect on psychological well-being.

Dependency Goals: Individuals are believed to have a set of goals/objectives on a day-to-day basis which require fulfilment. The present study measures dependency as an extent/degree that inclines our subject of observation, in this research, to use social media. The original Media Dependency identifies six primary goals. However, considering the study's focus on dependency within the digital communication sphere (social media), it is pertinent to include expression as an additional significant goal for interactive users as was earlier used by Kim and Jung (2017).

(a) Understanding

This conceptualizes into self-awareness and critical thinking for making sense around. Vague in comprehension, it is further elaborated as follows:

Classical conceptualization: The concept of understanding has been explored from various perspectives by different scholars, who generally agree that it extends far beyond merely acquiring information. Understanding involves the ability to assemble, apply, and contextualize meaningful insights from abstract concepts. The concept was foremost conceived by Ryle (1949) who stated that to understand is to know how to grasp certain concepts and implement them concretely instead of holding theoretical knowledge. He emphasized the importance of practical application over cognitive processing. Gardner (1983) echoed this sentiment in his *Theory of Multiple Intelligences*, describing Understanding as an ability to critically think and to adapt to new and challenging situations. Sternberg (1985) further defined Understanding as the process of analyzing and synthesizing information within the human mind. Sellars (1963) described understanding as "the ability to grasp the meaning, significance, and relations of ideas, concepts, or experiences in a way that integrates them into a coherent whole." Finally, from a broader perspective, Habermas in his *Theory of Communicative Action*, identified understanding as a basic foundation for developing consensus with other fellow beings (1984).

Conceptualization with Social Media: With the rise of social media, its influence on people's perceptions, attitudes, and behavior has given much space to scholars to yield significant studies in this domain. Berger and Luckmann's *Theory of Social Construction of Reality* (1966) declares social media to be an extremely powerful tool for constructing and disseminating images. Social media shapes users' understanding in line with what is socially constructed online; a repeated exposure to social media content enables users to frequently remember it. Moreover, conceptualization relates to how users draw inferences about their own selves in the light of exposure to social media, particularly, how much and for what they require

presence of social media in their lives to enhance their outlook on self-confidence, self-motivation, and personal identification. It is also a conceptualization of users' interpretation of the world, people and events in the light of social media, particularly, how much and for what they require presence of social media in their lives to enhance their belief systems towards connectivity with the happenings around.

In the present study, *understanding* is related to cognitive comprehension of how to perceive after social media post-consumption.

Operationalization: To measure understanding from **self-integrative aspect**, the researcher in the present study posed two questions: “Does social media usage assist you in making day-to-day decisions by driving you to get engaged in certain activities while skipping the rest” and “Do you use social media as a tool to review actions of your past and seek possibilities for personal improvement for the future?”

Second to this, understanding was measured from **social-integrative** aspect for which researcher in the present study posed two questions: “Does social media assist you in finding out about the latest happenings in your surroundings/community/society including events that you could take a keen interest in?” and “Do social media platforms assist you in planning a better future for yourself and your loved ones?”

(b) Orientation

In the present study, orientation relates to provocation on how to act after consuming media content.

Moreover, its conceptualization syndicates both active, i.e. an individualistic notion of everyday decisions on how to carry oneself in society; what to buy, how to dress

up, etc., and interactive, i.e. a communistic notion of how to carry on a particular activity within a group or society. For example, getting hints on how to handle oneself in a hostile or peaceful situation, etc., respectively.

Operationalization: To measure orientation from active-perspective, the researcher developed one closed-ended question with a 5-point Likert scale ranging from 1 as “Never” to 5 as “Always” for estimating users’ individual orientation, i.e. “Do you get facilitated by social media in seeking vast options for yourself to make decisions regarding purchasing products or accessing specific services?”

Second to this, orientation was measured from an interactive-perspective by the researcher by developing two closed-ended questions with a 5-point Likert scale ranging from 1 as “Never” to 5 as “Always” for estimating users’ collective orientation i.e. “Does social media help you in learning ways to manage yourself in times of conflict or crisis?” and “Does social media assist you in learning how to handle a situation when you are confronted by your counterparts?”.

(c) Play

In the present study, play relates to rejoicement in getting entertained by association with media content.

Moreover, its conceptualization syndicates both solidarity, i.e. when users find solace in relaxation and pleasure from media primarily to get away from daily routine activities, and social, i.e. when users use media to get connected amongst themselves, respectively. As the pioneers of the theory state, “wherein message content takes on secondary importance, it when the play takes a social form.”, a categorization into the concept bore rationale for the research to operationalize it separately.

Operationalization: To study respondents' dependency on social media to get amused by its content during leisure moments, the researcher designed two questions with a 5-point Likert scale ranging from 1 as "Never" to 5 as "Always" within the context of this sub-variable, i.e. "Does social media serve you as a means of relaxation and diversion from your dull routine?" and "Do you get pre-occupied with online activities on social media?". Also, the questionnaire comprised two questions to study the second subset of Play. The 5-point response bar ranged from 1 as "Never" to 5 as "Always" for queries, "Does social media generate enough content for you to engage in offline discussions with others?" and "Do you get virtually connected to attend events and meetings?".

(d) Expression

A risen trend to depend on social media for gratification of one's needs leads to another goal. As known, social media have allowed users to display their emotions and feedback, all that was missing previously with their experiences associated with traditional media. Digital platforms have given communication two-way traffic (Phillips, 2008) alongside yielding a chance for users to exhibit their thoughts (Dijck, 2013). The goal, however, cannot be divided into self or social due to complications in determining the results from a digital platform.

Operationalization: Respondents were asked to evaluate their expression through social media by answering three questions, each with a 5-point scale ranging from 1 as "Never" to 5 as "Always": "Does social media provide a convenient pathway to you for sharing your thoughts and feelings with others?", "Does your engagement in dispersing knowledge and awareness, on social media, contribute to the exchange of information and collective learning for others?" and "Do you engage in self-disclosure (displaying and portraying your personality) on social media?".

4.4.3. Dependent Variable

The conceptualization and operationalization of the variable is stated as below:

V. Effects

The final concept utilized in this study is effects which is a last and dependent core variable. On a literary note, these are believed to be an outcome of a certain situation or happening. In the domain of media research, scholars haven't surpassed effects while studying the content of the media as both are influential on each other. Various research studies on social media explored its usage and the impact it has on individuals' offline environments (Chan, 2016). A break-down of the core variable suggested the following to be measured where the researcher's prime focus was to measure the first and last one i.e. Cognitive & Behavioral:

- i) Cognitive
- ii) Affective
- iii) Behavioral

It may not be inadequate to state that social media is not responsible for a total exemption of individuals from their real-world environment but it is infact a driver of users' cognitive, affective and behavioral imprints in both online and offline communication infrastructures.

The above two i.e. (i) and (ii) are categorized into two abstract groups dealing with mental processes. They are distinguished from behavioral as they are merely (internalization) objectification and not externalization. The first one deals with mental processing to attain knowledge, perceive the environment around, think or reason,

memorize, remember, or to like. Resultantly it leads to the formation of ideas, opinions, and beliefs. The second deals with mental processing to develop feelings, moods, or an emotional state. The last one is categorized as an act of an individual. It showcases the observable attributes of mental processing an individual exhibit.

Summing up, it can be stated that whatever a person acts as is itself a perfectly acceptable source of data (information) about his/her cognitive processes. Common indicators of cognitive and behavioral effects found after reviewing the literature are described as below:

(a) Psychological Manifestations

Indicators: The psychological effects caused by social media content include a number of evaluated parameters amid which foremost is (a) satisfaction. Satisfaction is the ability to determine if one stays contented or not in routine day-to-day matters. Second being most important is his or her (b) ability to manage daily life stresses followed by third as (c) having a sense of purpose and meaning in life, fourth as (d) having sound perceptions of present circumstances and future prospects, fifth (e) by being productive and able to focus on daily routine, sixth (f) having an urge to be like others known as imitation, seventh (g) a constant feeling of uneasiness under a specific situation called anxiety, and a last eight one is (h) to be restless.

Operationalization: The variable was operationalized by a set of 8 items comprising six queries with 5-point Likert scale ranging from 1 as “Not at all” to 5 as “To a greater extent” and the remaining two with a range of 1 as “Strongly disagree” to 5 as “Strongly agree”. The queries developed were “How much are you generally satisfied in your life after consuming social media?”, “How much does social media consumption influence your ability to manage daily life stresses effectively?”, “How much does

consuming social media contribute to your sense of purpose and meaning in life?”, “How much does consuming content on social media influence your perceptions of your present circumstances and future prospects?”, “Has your social media usage negatively impacted your productivity or ability to focus on offline tasks?”, “Do you find it difficult to relax yourself after using social media?” and “How much do you imitate others in terms of lifestyle, achievements, or appearance after seeing them on social media?”

(b) Pro-Social Behavior

Indicators: A pro-social behavior as a result of social media effects includes every individual to be (a) collectively engaged or participating in activities within a society, to (b) reform ideas and to (c) volunteering for a common cause by (d) helping others and (e) participating in community events. Moreover, the outcomes can also yield an individual to (f) visit/travel and (g) get in contact with like-minded people.

Operationalization: Following the understanding of the indicators, the variable was assessed using five items on a 5-point Likert scale, aimed at gauging respondents' active involvement in social development. One item was rated from 1 as "Strongly disagree" to 5 as "Strongly agree", another from 1 as "Not at all" to 5 as "To a greater extent", and the remaining three were rated from 1 as "Never" to 5 as "Always". The queries developed were ‘In your own experience, social media fulfil their role in raising awareness about social issues and also inspire you and others for collective actions in the society?, “In your own experience, social media facilitate a community or organizations towards a collective action for social good or reformation?”, “Do you engage in offline pro-social activities (For example volunteering, helping others, participating in community events) as a result of interactions or discussions on social media?”, “Do you visit/travel to different places after exploring videos and content about them on social media?” and “Do you get in contact with like-minded people after exhibiting your talents (For example art, music, photography, blogging, or other self-disclosure activities) on social media?”

4.5. Data Collection

The researcher began to collect data during the summer 2024. Students were identified as per the sample of the study. The students were surveyed by visiting their classrooms and obtaining special permission for fifteen minutes from the instructors. The questionnaires were then distributed and administered to see if there was no difficulty for any respondent in filling the information within. The questionnaires were returned and stapled inside a file, each kept for record maintenance. The entire procedure met completion within a time-span of four weeks. Two questionnaires were incomplete and excluded from final analysis.

4.6. Reliability Testing During Pilot Study

Approximately fifty questionnaires were distributed and pre-tested twice on two sets of respondents before final distribution to the vast sample size. This was to analyze each respondent's ability to timely respond and to evaluate if the items in the questionnaire maintained his/her interest in understanding and answering the questions. The time duration for filling out a questionnaire was also observed. Relatively, some errors were identified and then amended in the final copies; most importantly included a usage of complicated vocabulary in the questions that respondents of Quaid-i-Azam University found difficult to comprehend. It is also worth mentioning that the respondents chosen for preliminary study did not become a part of major survey. Feedback from some academic experts also proved to be helpful in refining and reshaping the overall outlook of the research tool.

4.7. Data Cleaning and Processing

Data were screened for missing values and outliers in accordance with standard data cleaning procedures recommended by Field (2018) and Pallant (2020). Later, all questionnaire answers were coded and imported into SPSS (Statistical Package for the Social Sciences). To ensure consistency and process control, the researcher manually entered the data. All entries were randomly cross-checked against the original questionnaires for verification in order to guarantee accuracy. Prior to the final analysis, any inconsistencies, if found, were fixed.

4.8. Descriptive Analysis

The data was pre-processed and descriptive statistics was carried out. Out of the total respondents, 179 (60%) were male and 119 (40%) were female. The youngest respondent in this survey was aged 18 years while the oldest was 30 years of age. The sample was grouped according to the age. Group 1 (18-20 years) had the highest percentage (19.4%, 12.6%, and 3.3% respectively) of respondents followed by Group 2 (21-23 years) with the second highest percentage (18.9%, 15.2%, and 14.9%, respectively) (see Table 4.15).

Table 2 Descriptive Statistics Of Respondents' Profile

		Total	Sum
Gender	Male	179 (60%)	298
	Female	119 (40%)	298
	Group 1 (18-20 years)	80 (%)	239/298

Age	Group 2 (21-23 years)	60%	179/298
	Group 3 (24-26 years)	70%	209/298
	Group 4 (27-30 years)	88%	262/298
Population	Quaid-i-Azam University	149 (50%)	
	Bahria University Islamabad Campus	149 (50%)	

As for the second query in the research tool, "How long have you been using social media?", the majority of the respondents highlighted a surging estimate (51.4%) of their social media consumption pointing towards adaptation of latest media technology during mid-2010s; a peak era for social media sites like Facebook, Instagram and Twitter to flourish (see Table 1).

Table 3 Temporal Usage – Descriptive Statistics Of Respondents' Social Media Engagement With Particular Aspect Of Duration

1. Approx. two years	(14.1%)
2. Approx. five years	(51.4%)
3. Approx. ten years	(26.8%)
4. Approx. fifteen years	(5.9%)
5. Approx. twenty years	(1.8%)

The third query of the research tool was to seek an estimate of frequency with which respondents were getting involved with the digital platform, "On average, how many hours per day do you spend on social media platforms?" Most of the respondents (34.5%) confessed that their social media usage is more than five hours a day bearing a consensus with the research findings of Rokeach, DeFleur, Loges and Jung (see Table 2).

Table 4 Temporal Usage – Descriptive Statistics Of Respondents’ Social Media Engagement With Particular Aspect Of Intensity

1. One hour	(3.8%)
2. Two hours	(14.3%)
3. Three hours	(19.8%)
4. Four hours	9 (27.7%)
5. Five hours and more	(34.---5%)

The sixth query in the research tool was analyze habitual usage of respondents in terms of their involvement with social media. The mean of “Do you view whatever interests you and gets your attention?” was 3.35 in comparison to “Do you use social media out of habit instead of looking particularly for the content?’ with a mean value of 2.88 (see Table 3). The majority of the respondents stated that they rarely gave attention to some content on social media without any specific purpose meaning that selectivity was present in their viewership preferences.

Table 5 Usage Pattern – Descriptive Statistics Of Respondents’ Habitual Usage Of Social Media

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	Mean	Std. Deviation
Do you use social media out of habit instead of looking particularly for the content?	2.88	1.056
Do you view whatever interests you and gets your attention?	3.35	1.105

Similar to following the patterns of social media involvement, the ninth query in the research tool was to analyze purposeful usage of the respondents i.e. “Do you skim through your news feed only to check what’s happening latest?”. The mean value was 3.32 (see Table 4). The majority of the respondents unveiled a moderate frequency of the second Usage Pattern stating that they rarely skimmed their newsfeeds with a purpose of checking in with their surroundings.

Table 6 Usage Pattern – Descriptive Statistics Of Respondents’ Intentional Usage Of Social Media

	Mean	Std. Deviation
Do you skim through your news feed only to check what’s happening latest? (passive consumption)	3.32	1.098
Do you search any content by simply typing a specific keyword? (active search)		

The third involvement pattern of social media usage was assessed through tenth, eleventh and twelfth queries in the research tool i.e. “As for your role, do you view, comment, or write feedback (e.g. on different posts, statuses, or tweets) on social media?”, “Do you share the content on your timeline or profile for others to view?”, and “Do you

use social media to socialize with others in an offline environment of yours?”. The standard deviation (SD) of 1.083 depicted that while some respondents are more active in viewing, commenting or writing on social media, others were less engaged. With a SD of 1.104, respondents showed diversities in an activity of sharing content on their timelines/walls for others to view. However, for the twelfth query, SD was higher at 1.129 revealing that social media was used to establish meaningful connections in a non-virtual environment (see Table 5). Not to mention, the majority of the respondents stated that they engaged in sharing the content on their social media timelines more than commenting on posts, writing tweets, etc.

Table 7 Usage Pattern – Descriptive Statistics Of Respondents’ Contributing Usage Of Social Media

	Mean	Std. Deviation
As for your role, do you view, comment, or write feedback (e.g. on different posts, statuses, or tweets) on social media?	2.80	1.083
Do you share the content on your timeline or profile for others to view?	2.86	1.104
Do you use social media to socialize with others in an offline environment of yours?	2.79	1.129

The mediating core variable Dependency was measured through its sub-variables i.e. understanding, orientation, play and expression. Understanding was split into self and social in the fourteenth and fifteenth queries of the research tool i.e. “Does social media usage assist you in making day-to-day decisions by driving you to get engaged in certain activities while skipping the rest” and “Do you use social media as a tool to review actions of your past and seek possibilities for personal improvement for the future?” The role of social media proved to be moderate for respondents who really relied on social media for both of the above objectives (see Table 6).

Table 8 Dependency – Descriptive Statistics Of Respondents’ Social Learning From Social Media About Oneself

	Mean	Std. Deviation
Does social media usage assist you in making day-to-day decisions by driving you to get engaged in certain activities while skipping the rest?	2.94	1.084
Do you use social media as a tool to review actions of your past and seek possibilities for personal improvement for the future?	3.10	1.091

The thirteenth and sixteenth queries of the research tool measured understanding from a social perspective i.e. “Does social media assist you in finding out about the latest happenings in your surroundings/community/society including events that you could take a keen interest in?” and “Do social media platforms assist you in planning a better future for yourself and your loved ones?”. With a mean score of 3.50, majority of the respondents stated that social media, as a suggestive tool, rarely provides them assistance in getting aware of the latest happenings around their society or community including events that could probably interest them. For an inquiry into how social media aids in helping them create a better future for themselves and their dear ones, the SD revealed an estimate settling at 1.155 showing respondents to be uncertain if they could consider social media to be a helpful guide in planning their future (see Table.7).

Table 9 Dependency – Descriptive Statistics Of Respondents’ Social Learning From Social Media About World

	Mean	Std. Deviation
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Does social media assist you in finding out about the latest happenings in your surroundings/community/society including events that you could take a keen interest in?	3.50	1.128
Do social media platforms assist you in planning a better future for yourself and your loved ones?	2.97	1.155

The seventeenth query in the research tool was designed to extract information from the respondents in terms of active orientation i.e. “Do you get facilitated by social media in seeking vast options for yourself to make decisions regarding purchasing products or accessing specific services?”. The majority of the respondents stated that they seldom find social media helpful in guiding them about what they could buy or which services they could avail (see Table 8).

Table 10 **Dependency – Descriptive Statistics Of Respondents’ Individual Actions Provoked From Social Media**

	Mean	Std. Deviation
Do you get facilitated by social media in seeking vast options for yourself to make decisions regarding purchasing products or accessing specific services?	3.17	1.069

The eighteenth and nineteenth queries in the research tool were designed to extract information from respondents regarding interactive orientation i.e. “Does social media help you in learning ways to manage yourself in times of conflict or crisis?” and “Does social media assist you in learning how to handle a situation when you are confronted by your counterparts?”. Most respondents felt that social media played a slightly valuable

role in guiding their responses to challenging or contentious situations. On the other hand, respondents had similar variances in viewpoints but were slightly more neutral to negative when it came to handling disputes (see Table 9).

Table 11 Dependency – Descriptive Statistics Of Respondents’ Collective Actions Provoked From Social Media

	Mean	Std. Deviation
Does social media help you in learning ways to manage yourself in times of conflict or crisis?	3.13	1.180
Does social media assist you in learning how to handle a situation when you are confronted by your counterparts?	2.96	1.075

Respondents’ dependency goal namely play was observed from an individualistic perspective through twentieth and twenty-first queries in the research tool i.e. “Does social media serve you as a means of relaxation and diversion from your dull routine?” and “Do you get pre-occupied with online activities on social media?”. Social media was considered a normal remedy to routine tiredness by the respondents who believed that it rarely provided them a diversion. Relatively, respondents generally indicated that they rarely participate in online activities on social media (see Table 10).

Table 12 Dependency – Descriptive Statistics Of Respondents’ Solo Amusement Derived From Social Media

	Mean	Std. Deviation
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Does social media serve you as a means of relaxation and diversion from your dull routine?	3.31	1.106
Do you get pre-occupied with online activities on social media?	3.01	1.105

Likewise, play was also looked into from a collectivist perspective through a twenty-third query, “Does social media generate enough content for you to engage in offline discussions with others?”. The majority of respondents chose 2 as "Sometimes" when asked if social media provides them with sufficient content for use in their offline environments. They also acknowledged that social media offers a digital platform that extends opportunities for professional connections beyond limitations (see Table 11).

Table 13 Dependency – Descriptive Statistics Of Respondents’ Collaborative Amusement Derived From Social Media

	Mean	Std. Deviation
Does social media generate enough content for you to engage in offline discussions with others?	2.95	1.03

Expression as a last subset variable was executed for information through twenty-fourth, twenty-fifth and twenty-sixth queries in the research tool i.e. “Does social media provide a convenient pathway to you for sharing your thoughts and feelings with others?”, “Does your engagement in dispersing knowledge and awareness, on social media, contribute to the exchange of information and collective learning for others?” and “Do you engage in self-disclosure (displaying and portraying your personality) on social media?”. The table shows that most respondents felt social media is seldom a platform

for expressing their thoughts and feelings. However, they viewed it as an excellent tool for personal branding (see Table 12).

Table 14 **Dependency – Descriptive Statistics Of Respondents’ Self-Revelation On Social Media**

	Mean	Std. Deviation
Does your engagement in dispersing knowledge and awareness, on social media, contribute to the exchange of information and collective learning for others?	3.09	1.148
Do you engage in self-disclosure (displaying and portraying your personality) on social media?	2.88	1.085

An analysis into the final core variable of effects with particular reference to psychological manifestation was done through a number of queries in the research tool ranging from 32-39 i.e. “How much are you generally satisfied in your life after consuming social media?”, “How much does social media consumption influence your ability to manage daily life stresses effectively?”, “How much does consuming social media contribute to your sense of purpose and meaning in life?”, “How much does consuming content on social media influence your perceptions of your present circumstances and future prospects?”, “Has your social media usage negatively impacted your productivity or ability to focus on offline tasks?”, “Do you find it difficult to stop using social media even when you intend to?” and “Do you find it difficult to relax yourself after using social media?”. The responses yielded that respondents found it difficult to cut off all sorts of interactions with social media (see Table 13).

Table 15 **Effects – Descriptive Statistics Of Post-Consumption Implications (Mental Outcomes) On Respondents**

	Mean	Std. Deviation
How much are you generally satisfied in your life after consuming social media?	3.06	.999
How much does social media consumption influence your ability to manage daily life stresses effectively?	3.05	1.096
How much does consuming social media contribute to your sense of purpose and meaning in life?	3.00	.999
How much does consuming content on social media influence your perceptions of your present circumstances and future prospects?	3.08	1.051
Has your social media usage negatively impacted your productivity or ability to focus on <i>offline</i> tasks?	3.32	1.025
Do you find it difficult to relax yourself after using social media?	3.00	.957
How much do you imitate others in terms of lifestyle, achievements, or appearance after seeing them on social media?	2.92	1.161

Similarly, an analysis into the final core variable of effects with particular reference to pro-social behavior was done through a number of queries in the research tool ranging from 27-31 i.e. “In your own experience, social media fulfil their role in raising awareness about social issues and also inspire you and others for collective actions in the society?”, “In your own experience, social media facilitate a community or organizations towards a collective action for social good or reformation?”, “Do you engage in offline pro-social activities (For example volunteering, helping others, participating in community events) as a result of interactions or discussions on social media?”, “Do you visit/travel to different places after exploring videos and content about them on social media?” and “Do you get in contact with like-minded people after

exhibiting your talents (For example art, music, photography, blogging, or other self-disclosure activities) on social media?’. Most of the respondents confessed that they used social media to form commonalities with people who shared their hobbies and interests (see Table 14).

**Table 16 Effects – Descriptive Statistics Of Post-Consumption Implications
(Social Interconnectivity) On Respondents**

	Mean	Std. Deviation
In your own experience, social media fulfill their role in raising awareness about social issues and also inspire you and others for collective actions in the society.	3.50	1.021
In your own experience, social media facilitate a community or organizations towards a collective action for social good or reformation?	3.41	.923
Do you engage in offline pro-social activities (For example volunteering, helping others, participating in community events) as a result of interactions or discussions on social media?	2.96	1.104
Do you visit/travel to different places after exploring videos and content about them on social media?	2.93	1.106

CHAPTER 5

RESULTS

5.1 Overview

The present doctoral research aimed to evaluate individuals' association with social media revolving around main parameters, i.e., (i) the duration and frequency by which the youngsters associate with social media (ii) having specific involvement styles (iii) and how this is intermediated by their dependency goals (iv) to produce certain effects after content consumption. This chapter will generate a discussion on the results of these major dynamics of social media.

The data, after being pre-processed, was processed through SPSS (Statistical Package for the Social Sciences) to analyze the results. The variables were measured with each other in a sequential loop taking in count independent within its subsets, independent with mediating, independent with dependent, mediating within its subsets, mediating with dependent, dependent within its subsets (*see Figure 1*).

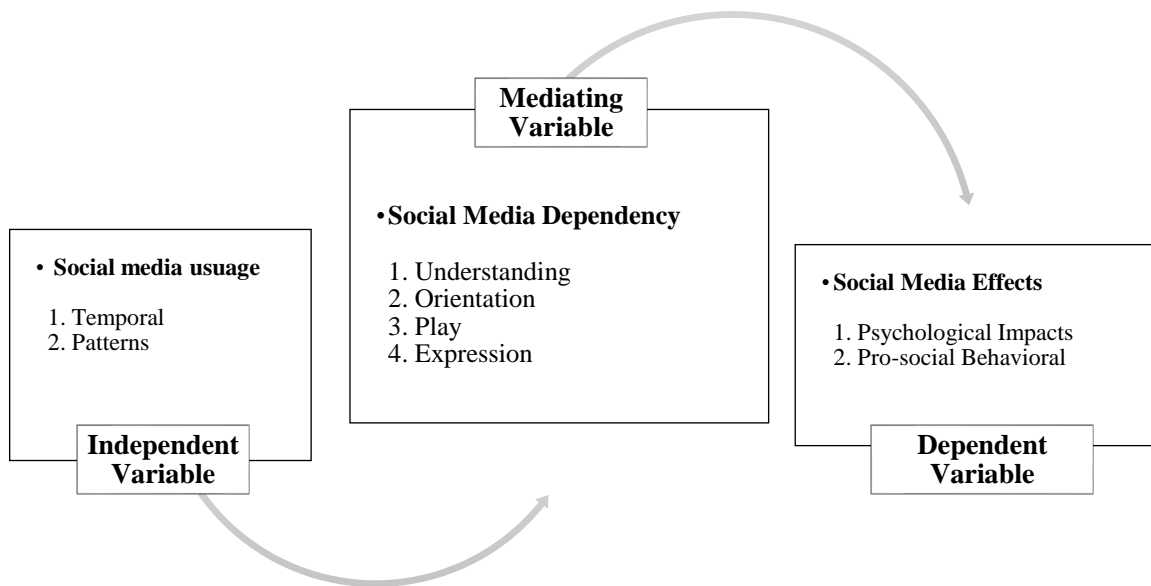


Figure 1 Interlinked Measurements of the Patent Variables of the study

5.2 Findings with the Research Questions

Following results answered each research query of the current study as below mentioned statistical calculations

5.3 Dynamics Of Social Media Consumption And Gender (Independent With Independent Subsets, Independent With Mediating)

The very first interrogation in this research domain was to find if there comes any discrepancy in types and time frequency of social media consumption respective of both males and females that was leading to reliance on social media.

RQ1: Do male and female respondents differ from each other in terms of *Social Media Usage (Temporal, Patterns)*, and *Social Media Dependency (Understanding, Orientation, Play, Expression)*?

Table 17 Relationship Between Respondents and Social Media In Terms Of Duration, Patterns, And Dependency

Social Media Usage (temporal)	Gender	Mean	Std. Deviation	t-test	p-value
History (years)	Male	2.31	.916	3.241	.175
	Female	2.28	.736	----	----
Daily use (hours)	Male	3.54	1.194	14.002	.001
	Female	4.06	1.086	----	----
Social Media Usage (patterns)					
Ritualized	Male	2.9672	.82521		
	Female	3.3459	.84985	-6.251	.505
Instrumental	Male	3.3919	.81192		
	Female	3.3695	.74794	.393	.092
Participatory	Male	2.9096	.78876		
	Female	2.6813	.77450	4.018	.189
Social Media Dependency					
Understanding	Male	3.1107	.79178		
	Female	3.1536	.75717	-.759	.271
Orientation	Male	3.0664	.85974		
	Female	3.1247	.76151	-.979	.000
Play	Male	2.9836	.71243		
	Female	3.0393	.67780	-1.099	.032
Expression	Male	3.1201	.79938		
	Female	2.9969	.84663	2.074	.295

With a mean value of 2.31 years, the results (*see Table 17*) showed that male gender had historically used social media for a slightly longer period of time than the female gender. The male respondents had a higher variability in years of usage (.916) than female respondents (.736). The results of the t-test showed a value of 3.241 and a p-value

of.175 indicating that there was no statistically significant difference in the usage histories of both the genders. In contrast, female respondents were found to be using social media more frequently than the male respondents, averaging 4.06 hours each day. The standard deviation (SD) figures showed that the variability in daily usage was slightly larger in the male respondents (1.194) than in the female respondents (1.086). Furthermore, a statistically significant difference in the amount of time spent on social media per day between the genders was found using the t-test and p-value, with the female respondents spending more time online.

The usage patterns indicated that respondents who were male tended to engage with social media at a higher rate than those who were female. With a mean value of 3.3459, the female gender demonstrated greater involvement in *ritualized* usage as compared to the male gender. The gender differences in variability were indicated by the standard deviation (SD), which was marginally higher in female respondents (.84985) than in the male respondents (.82521). Furthermore, the p-value indicated that there was no statistically significant difference in the first use pattern between both the genders. In comparison to the female gender, the male gender's mean for *instrumental* usage was 3.3919, which was marginally higher. In contrast to the female respondents (.74794), the male respondents' (SD) was .81192 that indicated a slight higher variability. A p-value of .092 was accompanied the t-test value of .393 displaying no statistically significant difference in the second use pattern between both the genders. A mean score of 2.9096 for *participatory* usage showed that male respondents outnumbered the female respondents. The gender differences were evident in the (SD) values, with the male gender exhibiting somewhat greater variability than the female gender. There was no statistically significant difference in the third use pattern of both, according to the t-test value of 4.018 and p-value of .189.

For dependency goals, with a mean score of 3.1536, the female respondents demonstrated a little stronger inclination for *understanding* than the male respondents. The two showed nearly identical variability, according to the (SD) value. There was no statistically significant difference between the genders in the first subset of *Social Media Dependency*, as indicated by the t-test value of -.759 and the p-value of .271. The mean

values of both the genders for the second subset *orientation* showed female gender to be more actively inclined to perform after post-consumption of social media content than the male gender. With a (SD) value at .85974, the male gender showed a high variability. The female gender, on the other hand, showed slightly higher scores for this second subset with the t-test value of -.979 and a p-value of .000. Relative to the mean values of the second subset, the third subset *play* displayed female gender to be more active at 3.0393 as compared to the male gender. The (SD) for this specific subset revealed similar variability between the two genders. The female respondents were similarly observed to be exceeding the estimate, as indicated by the p-value of .032 and the t-test results of -1.099. For the fourth and the last subset, with a mean score of 3.1201, male respondents showed a greater tendency for expressiveness than did the female respondents. The *expression* variability was slightly higher in the female gender with a (SD) of .84663 in comparison to the male gender. The results of the t-test and p-value suggested that there was no statistically significant difference between the both.

In summary, the findings (refer to *Table 17*) indicated notable variations between genders concerning the "Daily Time Spent on Social Media," *orientation*, and *play* subsets of *Social Media Dependency*; female respondents exhibited higher scores here. However, for most other parameters, no statistically significant differences were found between males and females.

5.4 Interlinkage Between Social Media Exposure Duration And Engagement Styles (Independent Subsets With Independent Subsets)

The second interrogation in this research domain was sought to ascertain whether there exists some connection between respondents' social media engagement styles and their exposure duration. The researcher postulated the following query in this reference:

RQ2: Is there any relationship between the subsets of *Social Media Usage (Temporal and Patterns)*?

Table 18 Relationship between interaction style and exposure duration to social media

		Social Media Usage (Patterns)			Social Media Usage (Temporal)	
		<i>Ritualized</i>	<i>Instrumental</i>	<i>Participatory</i>	<i>History of usage (years)</i>	<i>Daily time spent (hours)</i>
Social Media Usage (Ritualized)	Pearson Correlation	1	.274**	.121**	.094**	.354**
Social Media Usage (Instrumental)	Pearson Correlation	.	1	.022	.116**	.198**
Social Media Usage (Participatory)	Pearson Correlation			1	.078*	.001
Social Media Usage (Temporal)	Pearson Correlation				1	.092**
History of usage (years)	Ed					
Social Media Usage (Temporal)	Pearson Correlation					1
Daily time spent (hours)						

The *Table 18* shows a correlation matrix calculated by the researcher to examine the connections between different dimensions of social media usage. For this specific purpose, Pearson Correlation is used as it measures the strength and direction of the linear relationship between two variables.

The findings showed that the first use pattern correlated more strongly with the second use pattern and daily consumption of social media. In elaboration, *ritualized* and *instrumental* social media usage had a moderately strong, positive connection at .274. *Ritualized usage* exhibited a weak but significant positive connection at .121 with

participatory usage. *Ritualized usage* and the duration of a respondent's *Social Media Usage* showed a marginally significant but positive connection at .094. *Ritualized usage* of social media had a moderate, positive, and significant connection ($r = .354$) with everyday usage.

Meanwhile, the second use pattern was somewhat related to both the length of time a respondent had used social media and how much they were using it daily. In elaboration, there was no discernible relationship between the *instrumental usage* and *participatory usage*. The results showed a small but statistically significant positive connection ($r = .116$) between the number of years of social media consumption and *instrumental usage*. The second use pattern also showed a weak but significant positive connection ($r = .198$) for daily social media consumption.

The third use pattern had the weakest correlations overall, showing limited connection to the other use patterns and temporal use. In elaboration, *participatory usage*, was marginally significant at 5% level but at .078 showed a weak positive connection with the amount of years a respondent had been consuming social media. Additionally, at .001, it did not significantly correlate with the amount of time spent on social media each day. Lastly, there was a marginally significant positive link found between the amount of time spent on social media each day and the history of usage.

In summary, the findings (refer to *Table 18*) indicated that respondents who use social media habitually (*ritualized* social media usage) are likely to spend more time on it daily and may also use it for applied purposes (infotainment, entertainment, etc.) However, their active participation (*participatory* social media usage) does not strongly correlate with other use patterns or the time they've had spent or currently utilize on social media.

5.5 Interlinkage between duration of social media consumption with goals and goals with its subsets (Independent subsets with Mediating and Mediating subsets with the Mediating subsets)

The third interrogation for the current doctoral study was to examine the

interconnectivity of respondent’s social media use duration with that of consumption objectives. The researcher postulated the following query in this reference:

RQ3: To what extent, *Social Media Usage (Temporal)* correlates with *Social Media Dependency (Understanding, Orientation, Play, Expression)*?

Table 19 Correlation Between Temporal and Social Media Dependency

	Social Media Usage (Temporal)		Social Media Dependency			
	History of usage (years)	Daily time spent (hours)	<i>Understandin g</i>	<i>Orientation</i>	<i>Play</i>	<i>Expressio n</i>
Social Media Usage (Temporal)	1	.092**	.025	-.123**	.146**	.182**
History of usage (years)						
Social Media usage (Temporal)		1	.330**	.243**	.256**	.152**
Daily time spent (hours)						
Social Media Dependency (Understanding)			1	.564**	.569**	.483**
Social Media Dependency (Orientation)				1	.409**	.455**
Social Media Dependency (Play)					1	.573**
Social Media Dependency (Expression)						1

The *Table 19* shows a correlation matrix calculated by the researcher to determine connections between social media engagement duration with that of dependency goals, and the linkages within the subsets of *Social Media Dependency*. The results revealed that temporal use of social media in terms of history displayed a weak but significant positive correlation at .092 with the daily consumption of social media, illustrating that respondents who had used social media for more years tended to spend slightly more time on social media daily. This temporal use (history) depicted a weak correlation with dependency goal, *orientation* at -.123, suggesting that longer social media consumption is slightly associated with less dependency on using social media to connect with peers and align with social norms. With other subsets of *Social Media Dependency*, *play* and *expression*, the findings revealed a weak but significant positive correlations at .146 and .182, respectively; respondents who had been consuming social media for longer duration were slightly more inclined towards getting entertained or self-disclosure.

For temporal use of *Social Media Usage* in terms of daily consumption, the results revealed that it had a moderate positive correlation with dependency goal *understanding* at .330; respondents who spent more time on social media daily tended to use it for gaining insight and to remain informed. With other dependency goals *orientation*, *play* and *expression*, the correlations with this subset settled at .243, .256 and .152, respectively, illustrating that spending more time on social media was moderately linked to aligning with peers and getting blend within the social context, to get entertained and for self-disclosure. However, it is worth mentioning that daily social media consumption did not show very strong binding with respondents' dependency goal of self-disclosure.

Within the subsets of *Social Media Dependency*, *understanding* showed a strong positive correlation with *orientation* at .546; respondents who used social media for gaining insight and to stay well-informed also used it to align with their peers and to get mingled within the society. With *play* and *expression*, the first subset of *Social Media Dependency* revealed significant positive correlations settling at .565 and .483, respectively; for the respondents using social media for attaining knowledge was also related to using it for getting entertained and self-disclosure. A correlation of subsets,

orientation, play and *expression* presented moderate results at .409 and .455, respectively; respondents, if were using social media to get connected with peers and the surroundings, were also using it for fun and self-disclosure. For the last two subsets of *Social Media Dependency, play* and *expression*, correlation was positive at .573; respondents who used social media for entertainment were likely to engage in self-disclosure activities too.

In summary, the findings (refer to *Table 5.3*) revealed that respondents who used social media more frequently over time did so for self-disclosure and entertainment. Furthermore, spending more time on social media revealed a slight curiosity to learn, become socially netted, or to have fun. Within dependency goals, results showed a strong interconnection; respondents who relied on social media for one purpose (e.g., *understanding*) were likely to rely on social media for other purposes too (e.g., *orientation, play, and expression*).

5.6 Interlinkage between social media engagement styles with goals and goals with its subsets (Independent subsets with Mediating and Mediating subsets with the Mediating subsets)

The fourth interrogation for the current doctoral study was to examine the interconnectivity of respondent’s social media use styles with that of consumption objectives. The researcher postulated the following query in this reference:

RQ4: To what extent, *Social Media Usage (Patterns)* correlates with *Social Media Dependency (Understanding, Orientation, Play, Expression)*?

Table 20 Correlation between patterns and social media dependency goals

Social Media Dependency			Social Media Usage (Patterns)			
<i>Understandi</i> <i>ng</i>	<i>Orientation</i>	<i>Play</i>	<i>Expressi</i> <i>on</i>	<i>Ritualiz</i> <i>ed</i>	<i>Instrumen</i> <i>tal</i>	<i>Participat</i> <i>ory</i>

Social Media Dependency (Understanding)	Pearson Correlation	1	.564**	.569**	.483**	.323**	.407**	.361**
Social Media Dependency (Orientation)	Pearson Correlation		1	.409**	.455**	.237**	.272**	.396**
Social Media Dependency (Play)	Pearson Correlation			1	.573**	.392**	.273**	.288**
Social Media Dependency (Expression)	Pearson Correlation				1	.330**	.230**	.347**
Social Media Usage Pattern (Ritualized)	Pearson Correlation					1	.233**	.159**
Social Media Usage Pattern (Instrumental)	Pearson Correlation						1	.181**
Social Media Usage Pattern (Participatory)	Pearson Correlation							1

The *Table 20* shows a correlation matrix as a result of researcher's intention to explore the relationships between different goals of social media dependency and respondents' styles of engagement with social media.

With the first subset of *Social Media Dependency*, *ritualized* usage showed a moderate positive correlation ($r = .323$, $p < .01$); respondents with a higher intent of *understanding* engaged more with *ritualized* usage. *Understanding* with *instrumental* usage also displayed a moderate positive correlation ($r = .407$, $p < .01$); respondents with a higher intent of *understanding* engaged more with *instrumental* usage. Lastly, the third use pattern also demonstrated a moderate positive correlation ($r = .361$, $p < .01$); respondents with a higher intent of *understanding* engaged more with *participatory* usage.

The second subset of *Social Media Dependency*, *orientation* showed a weak positive correlation with *ritualized* usage ($r = .237$, $p < .01$); respondents with a higher intent of peer connectivity or social blending were slightly using social media as habit. With second use pattern, *orientation* was again weakly correlated ($r = .272$, $p < .01$); respondents with a higher intent of peer connectivity or social blending were slightly using social media purposefully. However, the third use pattern with the second subset of *Social Media Dependency* showed a moderate positive correlation ($r = .396$, $p < .01$); respondents with a higher intent of peer connectivity or social blending were also actively participating on social media.

Social Media Dependency with its third subset, *play* showed a slight positive correlation with the first use pattern of *Social Media Usage* ($r = .392$, $p < .01$); respondents who found social media to be a significant part of their amusement, escapism, leisure experiences were more likely to be habitual users. Contrary, there was a weak positive correlation ($r = .273$, $p < .01$) between *play* and the second use pattern of *Social Media Usage*; respondents who found social media to be a significant part of their amusement, escapism, leisure experiences had a small tendency to use social media for aimed purposes. With last use pattern of *Social Media Usage*, there existed a modest association with *play* ($r = .288$, $p < .01$); respondents who found social media to be a significant part of their amusement, escapism, leisure experiences were somewhat more likely to get engaged in contributing activities (e.g., interacting, sharing, and contributing content).

Expression, as a last subset of *Social Media Dependency*, revealed a moderate positive correlation with the first use pattern of Social Media Usage ($r = .330$, $p < .01$); respondents were more likely to demonstrate established and regular habitual

consumption of social media in their daily routine lives when they demonstrated a higher level of need to self-disclosure (sharing personal ideas, feelings, or creative content). A correlation with *instrumental* usage showed *expression* having a weak link. However, there was a slight tendency for expressive respondents to use social media for object-driven purposes. *Expression* with last use pattern, *participatory*, displayed a weak to moderate positive correlation ($r = .347, p < .01$); the findings indicated that those respondents who expressed themselves more on social media were also more likely to contribute constructivism (e.g., exchanging content, communicating with others, or getting actively engaged with the social media communities).

In summary, the findings (refer to *Table 20*) showed significant positive correlations with different dependency goals of the respondents and their various use patterns. The stronger correlations were observed between the first and third subsets of *Social Media Dependency* and second and third use patterns. The *ritualized* usage tended to be moderate in its correlation with most of the subsets of *Social Media Dependency* meanwhile *instrumental* and *participatory* showed varying correlations but generally the positive ones.

5.7 Interlinkage between social media engagement styles with post-consumption implications (mental outcomes and social interconnectivity) (Independent subsets with dependent subsets)

The fifth and the last interrogation in this research domain was to discover a degree by which respondents' interaction style with social media could be associated with the post-consumption outcomes. The researcher postulated the following query in this reference:

RQ5: To what extent *Social Media Usage (Patterns)* correlates with *Social Media Effects (Psychological Impacts and Pro-Social Behavior)*?

Table 21 Correlation between Independent and Dependent Variables

		Social Media Usage (Patterns)			Social Media Effects	
		<i>Ritualize</i>	<i>Instrument</i>	<i>Participato</i>	<i>Psychologica</i>	<i>Pro-Social</i>
		<i>d</i>	<i>al</i>	<i>ry</i>	<i>l Impacts</i>	<i>Behavior</i>
Social Media Usage Pattern (Ritualized)	Pearson Correlatio n	1	.233**	.159**	.301**	.291**
Social Media Usage Pattern (Instrumental)	Pearson Correlatio n	.	1	.181**	.418**	.371**
Social Media Usage Pattern (Participatory)	Pearson Correlatio n			1	.370**	.312**
Social Media Effects (Psychological Impacts)	Pearson Correlatio n				1	.527**
Social Media Effects (Pro-Social Behavior)	Pearson Correlatio n					1

The *Table 21* shows clear results where first use pattern of *Social Media Usage* had a positive association with *psychological outcomes* of *Social Media Effects* ($r = .301, p < .01$); respondents with heaped *ritualized* usage were more tended to depict psychological impacts. With the second subset of *Social Media Effects*, *ritualized* usage also showed a positive association ($r = .291, p < .01$). The correlations suggested that while *ritualized* usage was often seen as passive or habitual, it could still have significant influences on both subsets of *Social Media Effects*.

The second use pattern, *instrumental* usage also showed an affirmative

connection with the first subset of *Social Media Effects* as moderate to strong positive ($r = .418, p < .01$); respondents whose social media usage was objective-driven had a higher tendency to get psychologically affected. With the last subset of *Social Media Effects*, *instrumental* usage correlated positively ($r = .371, p < .01$); from the broader social fabric, respondents could foster helping, sharing, volunteering, or providing support through their purpose driven strategy of using social media.

The correlation between the first subset, *Psychological Impacts* and final most use pattern was displayed moderately positive ($r = .370, p < .01$); respondents who were more engaged in contributing to social media with their use tended to possess a heightened psychological implication afterwards. With *Pro-Social Behavior*, the last use pattern *participatory* depicted a moderate positive correlation ($r = .312, p < .01$); respondents, who had an active interactive presence on social media, were more likely to unveil pro-social behavior.

In summary, the findings (refer to *Table 21*) pointed towards the second use pattern, *instrumental* to be strongly associated with both the post-consumption outcomes meaning that an objective-driven approach to use social media is a stronger determinant of mental effects and positive constructive behavior in the society.

5.8 Regression Between Respondents, Social Media In Terms Of Duration And Styles Of Involvement, And Dependency

The first supposition by the researcher this research domain was that respondents' goal for dependency on social media would be determined more so by their styles of engagement with social media rather than the duration and intensity of their consumption.

H1 - The Social Media Usage (Patterns) is a significant predictor of Social Media Dependency (Understanding, Orientation, Play, Expression) as compared to

Social Media Usage (Temporal).

Table 22 Cross tabulation between duration, intensity and styles of engagement with social media with users' objective-driven reliance on social media

Model	Unstandardized Coefficients B	Standardized Coefficients Beta	T	Sig.
Social Media Usage (Temporal)	.054	.074	2.496	.013
Social Media Usage Pattern (<i>Ritualized</i>)	.197	.273	9.274	.000
Social Media Usage Pattern (<i>Instrumental</i>)	.194	.248	8.440	.000
Social Media Usage Pattern (<i>Participatory</i>)	.280	.357	12.344	.000

ANOVA= .001, F=95.968, R= .616^a, R Square= .379

a. Dependent Variable: Social Media Dependency

b. Predictors: Age, Social Media Usage (Temporal), Social Media Usage (Patterns)

Findings of regression, t-test and ANOVA analysis revealed that *Social Media Dependency* shared a positive significant relationship with *Social Media Usage (Temporal)* ($\beta = .054$, $p = .013$) meaning that respondents' duration and intensity of engagement with social media determined their dependency goals. With *Social Media Usage (Patterns)*, *ritualized* usage shared a positive significance as a predictor of *Social Media Dependency* ($\beta = .197$, $p = .000$); respondents who used social media out of habit were likely to get dependent on it for gratification of their objectives. Likewise, with *instrumental* usage, a strong positive relationship was seen with *Social Media Dependency* ($\beta = .194$, $p = .000$). On forward, the strongest positive relationship was observed between the third use pattern of *Social Media Usage* and *Social Media Dependency* ($\beta = .280$); respondents who were active interactive contributors within the social media spheres exhibited higher rates of dependency goals.

Summarizing the statistical measurements above (refer to *Table 22*), it can be concluded that all predictors [*Social Media Usage (Temporal and Patterns)*] significantly determined respondents' reliance on social media. Amid three use patterns, *participatory*

was found to bear strongest predictive influence, followed by *ritualized* and *instrumental*.

Result: The above hypothesis was partially supported.

5.9 Regression Between Respondents, Social Media In Terms Of Duration And Styles Of Involvement, And Social Interconnectivity Effects Of Post-Consumption

The second supposition by the researcher in this research domain was that respondents' desire to interconnect socially after using social media would be determined more so by their styles of engagement with social media rather than the duration and intensity of their consumption.

H2 - The Social Media Usage (Patterns) is a significant predictor of Social Media Effects (Pro-Social Behavior) as compared to Social Media Usage (Temporal).

Table 23 Cross tabulation between duration, intensity and styles of engagement, and post-consumption implication (social interconnectivity) of social media

Model	Unstandardized Coefficients B	Standardized Coefficients Beta	T	Sig.
Age	-.004	-.012	-.373	.710
Social Media Usage Temporal (History in years)	.085	.118	1.349	.073
Social Media Usage Temporal (Daily time hours)	.034	.120	1.674	.094
Social Media Usage Pattern (<i>Ritualized</i>)	.127	.180	5.504	.000
Social Media Usage Pattern (<i>Instrumental</i>)	.218	.285	8.758	.000
Social Media Usage Pattern (<i>Participatory</i>)	.180	.235	7.319	.000

ANOVA= .001, F= 48.465, R= .486^a, R Square= .236

a. Dependent Variable: Social Media Effects (Pro-Social Behavior)

b. Predictors: Social Media Usage (Temporal), Social Media Usage Patterns (*Ritualized, Instrumental, Participatory*)

Findings of regression, t-test and ANOVA analysis revealed that among predictors, demographic information (age) did not have positive significance with *Social Media Effects (Pro-Social Behavior)* ($\beta = -.004$, $p = .710$); respondents' desire for interconnectivity within their communities had no bearing with their ages. With *Social Media Usage's* first temporal the *Social Media Effects (Pro-Social Behavior)* depicted a positive relationship ($\beta = .085$, $p = .073$). The analysis however showed not so significant results ($p > 0.05$), validating presence of a few more contributing factors in developing the effect. Relatively, the second temporal of *Social Media Usage* also revealed a weak positive connection with that of dependent variable's subsets in observation ($\beta = .034$, $p = .094$).

With *Social Media Usage (Patterns)*, *Social Media Effects (Pro-Social Behavior)* relates significantly positive with the first use pattern ($\beta = .127$, $p = .000$); respondents need to connect within their communities tended to increase as per their habitual usage of social media. *Social Media Effects (Pro-Social Behavior)* was also observed bearing a robust positive relationship with the second use pattern ($\beta = .218$, $p = .000$) and the third use pattern ($\beta = .180$, $p = .000$); respondents with a higher desire to engage within their social capital were likely to have had elevated social media consumption styles comprising purposeful surfing and active contributions.

Summarizing the statistical measurements above (refer to *Table 23*), it can be concluded that **predictors** [*Age, Social Media Usage (Temporal)*] **were not the significant predictors of *Social Media Effects (Pro-Social Behavior)*. Conversely, *Social Media Usage (Patterns)* did seem to cause a significant influence on the dependent variable.**

Result: The above hypothesis was supported.

5.10 Regression Between Respondents, Social Media in Terms of Duration and Styles of Involvement, And Mental Outcomes of Post-Consumption

The third supposition for the current doctoral study was that respondents'

mental health after using social media would be determined more so by their styles of engagement with social media rather than the duration and intensity of their consumption.

H3 - The *Social Media Usage (Patterns)* is a significant predictor of *Social Media Effects (Psychological Manifestation)* as compared to *Social Media Usage (Temporal)*.

Table 24 Cross tabulation between duration, intensity and styles of engagement, and post-consumption implication (mental outcomes) of social media

Model	Unstandardized Coefficients B	Standardized Coefficients Beta	T	Sig.
Age	-.013	-.047	-1.515	.130
Social Media Usage Temporal (History in years)	.048	.59	.662	.074
Social Media Usage Temporal (Daily time hours)	.018	.052	-.135	.892
Social Media Usage Pattern (<i>Ritualized</i>)	.121	.178	5.679	.000
Social Media Usage Pattern (<i>Instrumental</i>)	.243	.331	10.598	.000
Social Media Usage Pattern (<i>Participatory</i>)	.209	.282	9.197	.000

ANOVA= .001, F= 66.772, R= .546^a, R Square= .298

a. Dependent Variable: Social Media Effects (Psychological Impacts)

b. Predictors: Social Media Usage (Temporal), Social Media Usage Patterns (*Ritualized, Instrumental, Participatory*)

Findings of regression, t-test and ANOVA analysis revealed that among predictors, demographic information (age) did not have positive significance with *Social Media Effects (Psychological Impacts)* ($\beta = -.013$, $p = .130$); social media had its imprints on respondents' mental health irrespective of how old they were. With *Social Media Usage's* first temporal the *Social Media Effects (Psychological Impacts)* depicted a positive relationship ($\beta = .048$, $p = .074$). The analysis however showed not so significant results ($p > 0.05$), validating presence of a few more contributing factors in developing the effect. Moreover, a weak significant influence was shown between the second temporal of *Social Media Usage* and *Social Media Effects (Psychological Outcomes)* ($\beta = .018$, $p = .892$); respondents were mentally affected by social media irrespective of the

duration and intensity of their social media consumption.

However, with *Social Media Usage (Patterns)*, *Social Media Effects (Psychological Manifestation)* showed a robust significance with *ritualized* usage ($\beta = .121$ with a $p = .000$), *instrumental* usage ($\beta = .243$ with a $p = .000$), and *participatory* usage ($\beta = .209$ with a $p = .000$). Among these, the second use pattern outshined the co use patterns; respondents whose social media usage was directed towards purposeful surfing bore more chances for mental outcomes to emerge.

Summarizing the statistical measurements above (refer to *Table 24*), it can be concluded that **predictors** [*Age, Social Media Usage (Temporal)*] **were not the significant predictors of *Social Media Effects (Psychological Manifestation)*. Conversely, *Social Media Usage (Patterns)* did seem to cause a significant influence on the dependent variable.**

Result: The above hypothesis was supported.

5.11 Regression Between Respondents and Social Media in Terms of Duration, Reliance and Post-Consumption Implication (Social Interconnectivity)

The fourth supposition for the current doctoral study was that respondents' objective attaining strategy to get engaged with social media would be a major cause for them to interconnect in their social capital rather than the duration and intensity of their consumption.

H4 – *Social Media Dependency* is a significant predictor of *Social Media Effects (Pro-Social Behavior)* as compared to *Social Media Usage (Temporal)* or the demographic information.

Table 25 Cross Tabulation Between Duration, Intensity, Users' Objective-Driven Reliance And Post-Consumption Implication (Social Interconnectivity) Of Social Media

Model	Unstandardized Coefficients B	Standardized Coefficients Beta	T	Sig.
Age	.022	.074	2.464	.014
Social Media Usage Temporal (History in years)	.013	.019	.617	.538
Social Media Usage Temporal (Daily time hours)	.563	.576	1.152	.250
Social Media Dependency	.018	.035	18.782	.000

ANOVA= .001, F= 103.194, R= .587^a, R Square= .344

a. Dependent Variable: Social Media Effects (Pro-Social Behavior)

b. Predictors: Age, Social Media Dependency, Social Media Usage Temporal (History in years), Social Media Usage Temporal (Daily time hours)

Findings of regression, t-test and ANOVA analysis revealed that among predictors, demographic information (age) had a positive significance with *Social Media Effects (Pro-Social Behavior)* ($\beta = .022$, $p = .014$); as the respondents aged, their desire to interlock with the society for its welfare also increased. Despite bearing consensus with the positive output, its effect tended not to outshine *Social Media Dependency*. With the first temporal use of *Social Media Usage*, the results did not show a significant relationship with the last subset of *Social Media Effects* ($\beta = .013$, $p = .538$). Relatively for the second temporal use of *Social Media Usage*, there was a weak link with *Social Media Effects (Pro-Social Behavior)* ($\beta = .563$, $p = .250$). Opposing to the leading variables, *Social Media Dependency* revealed a strong association with the last subset of *Social Media Effects* ($\beta = .018$, $p = .000$).

Summarizing the statistical measurements above (refer to *Table 5.9*), it can be concluded that **predictors** [Age, *Social Media Usage (Temporal)*] **were not the significant predictors of *Social Media Effects (Pro-Social Behavior)***.

Result: The above hypothesis was supported.

5.12 Regression Between Respondents And Social Media In Terms Of Duration, Reliance And Post-Consumption Implication (Mental Outcomes)

The fifth supposition by the researcher in this study was that respondents' objective attaining strategy to get engaged with social media would be a major cause for them to exhibit mental health outcomes rather than the duration and intensity of their consumption.

H5 – Social Media Dependency is a significant predictor of Social Media Effects (Psychological Manifestation) as compared to Social Media Usage (Temporal) or the demographic information.

Table 26 Cross tabulation between duration, intensity, users' objective-driven reliance and post-consumption implication (mental outcomes) of social media

Model	Unstandardized Coefficients B	Standardized Coefficients Beta	T	Sig.
Age	.017	.059	2.248	.025
Social Media Usage Temporal (History in years)	-.037	-.054	-2.058	.040
Social Media Usage Temporal (Daily time hours)	.657	.698	1.686	.092
Social Media Dependency	.022	.045	25.988	.000

ANOVA= .001, F= 194.880, R= .706^a, R Square= .498

a. Dependent Variable: Social Media Effects (Psychological Impacts)

b. Predictors: Age, Social Media Dependency, Social Media Usage Temporal (History in years), Social Media Usage Temporal (Daily time hours)

Findings of regression, t-test and ANOVA analysis revealed that among predictors, demographic information (age) had a positive significance with *Social Media Effects (Psychological Manifestation)* ($\beta = .017$, $p = .025$); as the respondents aged, their social media consumption impacted their mental health too. Despite bearing consensus with the positive output, its effect tended not outshine *Social Media Dependency*. The first use pattern of *Social Media Usage* showed a negative relationship with the first subset of *Social Media Effects* ($\beta = -.037$, $p = .040$). Relatively, with the second use

pattern of *Social Media Usage, Social Media Effects (Psychological Manifestation)* revealed a slight positive linkage ($\beta = .657, p = .092$); a frequency with which a respondent related to social media on daily basis were not a direct determinist of psychological effects in him/her. A substantial association was found between *Social Media Dependency* and the first subset of *Social Media Effects*, in contrast to the leading variables ($\beta = .022, p = .000$).

Summarizing the statistical measurements above (refer to *Table 26*), it can be concluded that **predictors** [*Age, Social Media Usage (Temporal)*] **were not the significant predictors of *Social Media Effects (Psychological Manifestation)***.

Result: The above hypothesis was supported.

5.13 Regression Analysis to Assess Mediation Power of Dependency Goals In Between Use and Effect (Mental Health) Of Social Media

The sixth supposition by the researcher in this study was to observe the mediation power of users' objective-driven strategy for an association with social media, by the duration, intensity, consumption styles, and their mental health as resultant outcomes.

H6 - *Social Media Dependency* mediates the *Social Media Effects (Psychological Manifestation)* of the *Social Media Usage (Temporal and Patterns)*.

Table 27 Comparison of Coefficients between Two Models of Social Media Dependency and Social Media Effects (Psychological Manifestation)

H6 - Social Media Effects (Psychological Manifestation)

Model 1

Model 2

	Beta+	t	Sig.	Beta+	t	Sig.
Age	.047 ^b	1.852	.064	.011	1.454	.146
Social Media Usage Temporal (History in years)	-.035 ^b	-1.373	.170	-.034	-1.912	.056
Social Media Usage Temporal (Daily time hours)	0.44 ^b	1.669	.096	.008	.583	.560
Social Media Usage Pattern (<i>Ritualized</i>)	.024 ^b	.880	.379	.006	.311	.756
Social Media Usage Pattern (<i>Instrumental</i>)	.185 ^b	6.946	.000	.130	6.501	.000
Social Media Usage Pattern (<i>Participatory</i>)	.076 ^b	2.705	.007	.050	2.434	.015
Social Media Dependency				.570	19.086	.000

ANOVA= .001^b, .001^c, F= 762.491, 125.148, R= .701^a, .727^b, R Square= .491, .528

a. Dependent Variable: Social Media Effects (Psychological Manifestation)

b. Predictors: Age, Social Media Usage Temporal (History in years), Social Media Usage Temporal (Daily time hours), Social Media Dependency

Findings of regression, t-test, and ANOVA analysis of *Model 1* revealed that among predictors, demographic information (age) was a weak determinant of the first subset of *Social Media Effects* ($\beta = .047^b$, $p = .064$). With the first temporal use of *Social Media Usage*, the results hinted that long-term association with social media was not apparently significant with respondents' mental health outcomes ($\beta = -.035^b$, $p = .170$). An assertive linkage was observed between respondents' routine consumption of social media and *Social Media Effects (Psychological Impacts)* ($\beta = 0.44^b$, $p = .096$); daily consumption of social media content by the respondents could contribute to a rise in

mental outcomes but the influence was not hiked. Observing the first subset of *Social Media Effects* in relation to *Social Media Usage (patterns)* depicted a non-significance linkage with *ritualized* ($\beta = .024^b$, $p = .379$), a strengthened relationship with *instrumental* ($\beta = .185^b$, $p = .000$), and a likelihood of an impactful influence of *participatory* on respondents' mindsets ($\beta = .076^b$, $p = .007$).

Summarizing the statistical measurements above (refer to *Table 27*), it can be concluded that **predictors** [*Age*, *Social Media Usage (Temporal)*, *Social Media Usage (Pattern: ritualized)*] **were not the significant predictors of *Social Media Effects (Psychological Impacts)***.

Findings of regression, t-test and ANOVA analysis of *Model 2* revealed that among predictors, demographic information (age) was a weak determinant of the first subset of *Social Media Effects* ($\beta = .011$, $p = .146$). With first temporal use of *Social Media Usage*, the results hinted that long-term association with social media was not evidently significant with respondents' mental health outcomes ($\beta = .034$, $p = .056$). Relatively no positive linkage was observed between respondents' routine consumption of social media and *Social Media Effects (Psychological Impacts)* ($\beta = .008$, $p = .560$). Observing the first subset of *Social Media Effects* in relation with *Social Media Usage (patterns)* depicted a non-significance linkage with *ritualized* ($\beta = .006$, $p = .756$), a stronger association with *instrumental* ($\beta = .130$, $p = .000$), and a likelihood of an impactful influence of *participatory* on respondents' mindsets ($\beta = .050$, $p = .015$).

With an add-on of *Social Media Dependency*, *Social Media Effects (Psychological Impacts)* posed a high consensus in the final results ($\beta = .570$, $p = .000$); respondents' mental health was prone to get affected as per their needs to consult social media content. Hence, the statistical measurements above (refer to *Table 27*), conclude that the predictor [*Social Media Dependency*] is a **significant predictor of *Social Media Effects (Psychological Impacts)***.

Result: **The above hypothesis was supported.**

5.14 Regression Analysis to Assess Mediation Power of Dependency Goals In Between Use and Effect (Social Interconnectivity) Of Social Media

The seventh supposition by the researcher in this study was to observe the mediation power of users’ objective-driven strategy for an association with social media, by the duration, intensity, consumption styles, and their social interconnectivity as resultant outcomes.

H7 - Social Media Dependency mediates the Social Media Effects (Pro-Social Behavior) of the Social Media Usage (Temporal and Patterns).

Table 28 Comparison of Coefficients between Two Models of Social Media Dependency and Social Media Effects (Pro-Social Behavior)

H7 - Social Media Effects (Pro-Social Behavior)						
	Model 1			Model 2		
	Beta+	t	Sig.	Beta+	t	Sig.
Age	.082 ^b	2.809	.005	.016	1.819	.069
Social Media Usage Temporal (History in years)	.041 ^b	1.422	.155	.014	.673	.501
Social Media Usage Temporal (Daily time hours)	.041 ^b	1.355	.176	-.001	-.037	.971
Social Media Usage Pattern (Ritualized)	.070 ^b	2.210	.027	.036	1.604	.109
Social Media Usage Pattern (Instrumental)	.182 ^b	5.943	.000	.129	5.368	.000
Social Media Usage Pattern (Participatory)	.070 ^b	2.174	.030	.051	2.065	.039
Social Media Dependency				.462	12.962	.000

ANOVA= .001^b, .001^c, F= 399.701, 66.964, R= .580^a, .612^b, R Square= .336, .374

a. Dependent Variable: Social Media Effects (Pro-Social Behavior)

b. Predictors: Age, Social Media Usage Temporal (History in years), Social Media Usage Temporal (Daily time hours), Social Media Dependency

Findings of regression, t-test and ANOVA analysis revealed that among predictors, demographic information (age) had a positive influence on the second subset of *Social Media Effects* ($\beta = .082^b$, $p = .005$); as a respondent grew past his/her years, his/her interest in the society also enhanced. Meanwhile, both temporal uses of *Social Media Usage* did not show a very positive connection with the outcomes (p-values of .155 and .176, respectively). With *ritualized* usage, the second subset of *Social Media Effects* showed a slight positive relationship ($\beta = .070^b$, $p = .027$); respondents who used social media casually were likely to get more engaged in their *offline* environment around. The strongest tie was revealed by an associated of *instrumental* usage and *Social Media Effects (Pro-Social Behavior)* ($\beta = .182^b$, $p = .000$). Whereas, a significant link was found between the last use pattern and second subset of *Social Media Effects*.

Summarizing the statistical measurements above (refer to *Table 28*), it can be concluded that predictors [*Age, Social Media Usage (Temporal)*] were not **the significant predictors of *Social Media Effects (Pro-Social Behavior)***. **This implies that how respondents used social media (purposefully and interactively) was more important than certain amount of period or frequency.**

Findings of regression, t-test and ANOVA analysis revealed that among predictors, demographic information (age) had a marginally non-significant influence on the second subset of *Social Media Effects* ($\beta = .016$, $p = .069$). Also there lied no significant relationship between yearly and daily duration of social media consumption and *Social Media Effects (Pro-Social Behavior)* ($p = .501$ and $p = .971$, respectively). With an add-on of *Social Media Dependency*, *ritualized* usage revealed a non-significant result ($p = .109$), *instrumental* usage was significant at .000, however, it was not stronger ($\beta = .129$) as previously in model 1, and *participatory* usage remained slight weaker ($p = .039$) in comparison to the previous model's estimate ($p = .030$).

With an add-on of *Social Media Dependency*, *Social Media Effects (Pro-Social Behavior)* posed a high consensus in the final results ($\beta = 462$, $p = .000$); respondents' desire to indulge themselves in social collective activities or travelling was

directly proportional to their needs to consult social media content. Hence, the statistical measurements above (refer to *Table 28a and Table 28b*), conclude that the predictor [*Social Media Dependency*] is a **predictor of Social Media Effects (Pro-Social Behavior)** and mediates the effects of the first and third use patterns of *Social Media Usage*.

Result: The above hypothesis was partially supported.

CHAPTER 6

CONCLUSION AND DISCUSSION

The purpose of this dissertation was to assess dependency on social media and its post-consumption implications on Pakistani youth. For this purpose, two reputable institutes in Islamabad were selected to conduct a survey. The researcher developed a close-ended questionnaire and random and systematic sampling was done for data collection upon dispersal. For addressing the research questions and hypotheses of the study, cross tabulations were done to find correlations between the variables

6.1 Discussion

To observe gender's engagement with social media in the current study, findings unveiled that both male and female respondents differed and conformed in terms of their involvement and reliance on social media. Although not very obvious yet a slighter longer duration of social media consumption was observed by male respondents as compared to the female respondents. Female respondents, on the other hand, reported a prolonged engagement with social media on daily basis. Also, a very slight impression lasted for female respondents' habitual usage of social media that was surging in comparison to the male respondents. This yields a call for caution in social media usage of females since there is a need for a check and balance of unmonitored and uncontrolled content consumption. In contrary, male respondents showed higher levels of intentional and

contributory social media usage, indicating a more responsible usage to attain benefits of learning and social assimilation. The goal areas for social media reliance also portrayed no significant outcomes. The female respondents were strongly inclined towards social media usage for amusement and social positioning whereas the male respondents showcased a higher preference to self-disclosure activities through virtual platforms. This finding related with the earlier results of a study by Ferris and Hollenbaugh (2014) as well as Anderson and Perrin (2019) in the literature that men prefer to reveal their personality attributes online in comparison to face-face interactions in their offline environment. In addition to this, a foundational work by Bargh and McKenna (2000) on “disinhibition effects” among men for an open expression within an online atmosphere instead of a traditional setting, do bear consensus with the findings of this current study. In short, the statistical significance of these differences underscores the considerable gender disparities in the involvement patterns of social media usage for various objectives.

While analyzing a correlation between social media consumption and involvement patterns, a complexed social media behavior was observed in the results where different involvement styles of social media usage showed diverse functionality and different correlations with social media usage across time and years. There was a higher estimate of social media consumption for attaining different objectives in association with its habitual usage. However, habitual usage was not strongly correlated with respondents’ contribution to the social media. It can be stated that respondents were more of spectators than active participating members in the virtual domain.

This finding of the current study coincided well with the earlier results of some studies observed in the context of social media which highlighted a prominent divide between passive and active consumption; ‘Active lurkers’ as defined by Yamasaki et al. (2003) referred to those users whose access to social media was regular however an active participation in the domain did not interest them. Brandtzæg and Heim ‘s study (2009) had found that frequent usage of social media as a habit did not equate to an active engagement for content creation and dispersal. Relatively a review by Griffiths and Kuss (2011) had mentioned that habitual users of social media often exhibited passive behavior

like scrolling through their feeds instead of showing a contributory presence.

The study results also found that respondents' purposeful social media usage did not significantly correlate with their participatory usage indicating that respondents desiring to obtain information from social media did not prefer to get engaged in active participation of content generation and dispersion through virtual channels. This might indicate a presence of a number of reasons behind such behavior. For instance, in relevance to the literature Culnan (1999) found that users intending to obtain information from social media abstained from actively participating in the digital sphere due to privacy concerns and risk to personal information. Later study by Park et al. (2009) found that users often feel a need to observe content on social media without feeling an urge to debate about it. Similarly, a research conducted on users during times of calamity by Hwang (2014) discovered that social media was predominantly accessed for information without active involvement in content creation.

The participatory usage also did seem to be existent with no strings attached to either its co-patterns of involvement or temporal dimensions. The findings of the current study correlated with earlier scholarships which have discoursed temporal irregularity too; Papacharissi as well as Shao (2009) argued that users often participate on social media based on convenience rather than fixed patterns or routines and also their contribution to the platforms is mostly momentary by interest. Ellison and Associates (2007) found that social media nurtures flexible interactions without consistent patterns for its users. A later study by Haase and Young (2010) also emphasized upon how social media usage intended for participatory reason lack structured involvement and was often free from temporal constraints.

The analysis of a linkage between social media consumption and goals areas of the users provided an insightful observation into how respondents engaged with social media to fulfil their goal-driven motivations. From historical perspective of social media engagement, respondents who had longer years of social media intake unveiled a light inclination towards amusement and self-disclosure on virtual channels. This finding of the current study differed from the earlier works of scholars Ahn (2011), Hogan (2010),

and Steinfield (2007), who have found that a prolonged engagement with social media in terms of temporal aspect yields ease for a convenient self-disclosure or for getting entertained. This implies a possibility of a demographic difference between the sample chosen at that time by those scholars and that the sample taken in count for the current study.

The likelihood of respondents thriving for infotainment portrayed a lesser tendency than their propensity for amusement and self-disclosure. The results of the findings found its paw prints with earlier works of Lang and Ruggiero (2000) who found that in 21st century a need for entertainment and self-revelation were more in preference to social media users in comparison to information seeking. Further ahead, other studies and their findings also laid consensus with the outcome of the current study; Kaye and Associates (2002) found that although users preferred social media for seeking information, yet their desire of entertainment and self-expression outshined more in comparison to surveillance. Relatively, users' social media usage is likely for social connections and self-presentation instead of informational purposes, according to Sheldon's study (2008).

From daily consumption perspective, respondents demonstrated a probability of their information seeking objectives motivating them for social media usage. This aligns with the findings of literature that individuals' daily exposure to social media gratifies their need to comprehend and makes a meaningful interpretation of their surroundings (Boulianne, 2015). The daily social media consumption was moderately associated with their goals areas of orientation and play. On the other hand, respondents' daily consumption of social media did not direct towards their need to self-disclose. This finding of the current study implies external factors behind the cover. Just as how Tandoc (2015) found that users often abstained from revealing much about themselves on social media due to presence of elements like envy and depression upon seeing others' updates or posts. A study of Vitak (2014) had found that a reason for not to self-reveal much on social media was due to a reason that users were comfortable in maintaining social connections rather revealing personal information. Moreover, social media does not

always result in greater self-disclosure, according to a study by Baumeister (2016). According to the outcome of his study, sharing personal information online wasn't always a necessary consequence of the quest for connection.

Within the goal areas, there existed a high correlation; respondents desiring knowledge acquisition were also keen towards networking, amusement and self-expressing on social media. It resulted in yielding that social media dependency is multi-faceted as it encompasses a number of users' objectives and is not limited to single. This could be relatable to a very early seminal work by Blumler and Katz (1974) who argued that media dependency is led by various needs of audience. This lays a foundation within changing mediascape of how users' social media usage is determined by numerous objectives in mind. From ahead, findings by Williams (2013) in his study bearing an approach of uses and gratification stated that social media dependency has multiple facets, as seen by the ways in which it is influenced by social interaction, self-expression, and information distribution. Also, another classical study of Andreassen (2017) forms a junction with the current findings that users are motivated to depend on social media on the basis of complex factors.

Upon observing a relationship between respondents' urge for information attainment, there came a moderate positive connection between the habitual, intentional and contributory styles of social media usage. In that aspect, respondents whose social media usage was out of habit did form a connection with a virtual channel by actively contributing and keeping in mind certain goal areas of theirs. This came aligned with recent studies in the domain which stated users' active networking through persistent engagement with social media. For instance, Baker and Velez (2020) found that regular users have a higher chance of establishing relationships with others through active content creation, experience sharing, and conversation participation. This was further validated by Eastin and LaRose in the same year. Similar to their study findings, another research by Mark and Miller (2021) unveiled that habitual usage of social media leads to an increased engagements fostering stronger networking with online communities.

With goal motive, orientation, involvement on social media demonstrated a somewhat less pronounced estimate. This was an exemplification of respondents' least interest in deliberately looking into the content. Relatively with a feeble correlation with instrumental usage, it showed that respondents' social media consumption was not directed to be a purposeful skimming. However, with a moderate positive correlation with participatory, it indicated that respondents' whose purpose behind social media usage was networking, did do well with contributing the content to sustain their digital presence and online social sphere. These results of this study bore consensus with the findings of the very earliest studies by Ellison (2007) that users who intended to form online networked existence, proactively participated in content creation and dissemination for sustaining a prominent presence in digital world. These findings were also validated after two years of another research by Heim and Associates (2009). To understand the functional building blocks of social media, Hermkens (2011) also agreed that users who intent to remain networked on digital platforms did so through posts, comments, feedback and connection requests. Moreover, taking in count the uses and gratification perspective, Lawlor and Rowley (2010) found that young users were regularly sharing content in order to remain visible amid social communities.

Respondents who used social media for reasons such as amusement, diversion or leisure, displayed habitual involvement patterns with social media usage. These findings align with the scholarship found in the research arena where using social media was often predicting a frequent engagement with social media as to feel a sense of reward/pleasure. Scholars like Ryan (2014), Sundar (2013), and Vorderer (2004) uncovered these similar facts through their work. In contrast, respondents unveiled that their deliberate social media usage was not a predictor of play; there wasn't any element of non-seriousness in their responsible consumption of social media. But with participatory involvement style of social media consumption, it can be stated that respondents who found social media amusing also did contribute content for others to get amused too. This supports the idea that social media provides a forum for recreation and communication, fostering a more involved and interactive experience.

Furthermore, the results of the current study demonstrated that respondents' habitual consumption of social media exhibited an urge to self-reveal/self-disclose. This suggested that respondents who had a surged urge to disclose their personal information were more likely engaged with social media as habit. Some studies in the research arena provide a collective scholarly evidence for these findings; Joinson (2008) discovered that users who were strongly compelled to reveal private information about themselves often associated with social media on a regular basis. Followed by this, researchers (Chen, 2013; Hughes et al., 2009; Primack et al., 2016; Taddicken et al., 2014) also observed that impulsive usage of social media was driven by users' active need to express. Not to mention, this stronger urge to attain emotional comfort also persisted despite privacy concerns.

Meanwhile respondents' intentional consumption of social media was a responsible and monitored one; it did not lead them to post personal stuff online. These findings found their significance in one of the earliest studies of Buxmann and his Associates (2017) who stated that users' mindful engagement with social media often leads to an avoidance of sharing personal information. Such users are more influenced to consume information related content. Relevance to this domain, there was another study by Bright and his Associates (2018) on FOMO. Although users intend to associate impulsively with social media, yet the findings of that study had revealed that users are likely to select content for viewing alongside avoiding to over-share about self. Two studies by Frison et al. (2020) revealed that youngsters whose social media usage is consistent for interacting with friends or to get information, they often opt more responsible posting practices.

A slight positive relationship between respondents' acts of contribution to the virtual sphere and a strategy to express oneself indicated functionality of social media as a platform for communication and self-expression that encourages a lively interchange of private content. Literature comprised scholarship highlighting noteworthiness of social media in encouraging a lively interchange of private information (Siddiqui et al., 2020). The strongest and influential relationship was observed between the goal areas understanding and play with various involvement styles of social media consumption.

These findings yield a meaningful insight into the ways by which different motivational factors influence patterns of social media usage and have important implications for theoretical and practical applications in the field of social media studies.

Another core objective of the current study was to observe implications of social media dependency in relevance to psychological manifestation and pro-social behavior. The findings revealed that different involvement styles of respondents with social media bore significant imprints on their cognition and behavior. Respondents whose social media consumption was habitual displayed notable influence of post-consumption; the passive social media usage was strong enough to throb into respondents' psyche and social actions. Likely so, respondents with responsible social media usage in finding a place for themselves and peers in the social context, experienced more pronounced effects. With clear and objective-driven strategies, social media was able to nourish beneficial activities like helping, donating, volunteering, sharing and travelling. From here, it can be stated that with a more meaningful social media usage, users' emotional responses and social contributions can be affected. This find relevance with the literature in studies of some scholars. For instance, Valkenburg and Associates (2020) found that users' emotional being was directly associated with their meaningful interaction on virtual platforms. On the other hand, Tandoc and his Associates argued that mindful social media usage paved a way for an enhanced emotional intelligence and a greater desire to make constructive contributions to the social conversations (2020).

It is worth mentioning that respondents' interactive engagement with social media also played a vital role in developing post-consumption implications. Respondents who actively contributed in content dispersal, commenting, sharing reviews or feedbacks on social media, were likely to uphold cognitive and behavioral influences. This implies that a more active usage of social media influences users' emotions and motivates them to do actions that builds community. It relates to the findings of a study by Zhang (2019) revealing that users who actively participate in social media content creation and interaction (such as sharing and commenting) were more likely to become cognitively engaged, in return affecting their behavioral intentions and actions. In another study, the

authors Sriram and Sridharan (2021) discovered that users who actively participate in discussions and provide high-quality information often show more behavioral and cognitive factors which are responsible in shaping their interactions and views on social networking sites. A slight modified results was found by Eshleman and Merrill (2022) stating that active contributing on virtual platforms was a source of better decision making.

It can also be noted that there was a notable correlation between respondents' responsible social media usage and post-consumption cognitive and behavioral implications. In spite of being lesser in intensity, individuals' habitual or contributory social media usage can too cause them to absorb certain effects as a result of post-consumption. Furthermore, these revelations aids in comprehending functionality of social media, through its nature of being interactive, and reshaping users' mental and networked involvements.

The current study findings substantiated thoroughly by a following discourse as presented:

Findings unveiled that social media dependency was affected by both, (i) a user's involvement with virtual platforms and (ii) an intensity of exposure to the virtual contents. The former had an advantage due to it being significant in comparison to the latter. Respondents who habitually surfed social media demonstrated higher levels of reliance on the medium. Moreover, a notable linkage was seen between respondents' intensity of reliance on social media and their intentional usage; who had a purposeful social media usage relied on social media to utilize it practically. The research findings of the current study revealed that respondents used social media more frequently when their usage was to contribute within the digital sphere by commenting, leaving feedback, and sharing content. This suggested that most of the respondents who used social media as a productive tool for expression had intensified levels of dependence on it. Summarizing, it could be adequate to state that the ways with which respondents engaged with social media were better drivers of dependence in comparison to the time spent. This aligns with

the findings of a classical study by Griffiths and Kuss (2017), who aimed to observe addictive patterns of social media consumption in the users. Subsequently, it was found that emotional investment and involvement patterns were better indicators of social media dependency than the aspect of duration alone. The findings also bore consensus with the research findings of Rosen (2019) that networked connections and social validation were more responsible in generation dependency on virtual platforms than the time associated with them could ever. The similar results were presented by Wang and Associates (2020) that the type of interaction rather than the amount of time spent on social media was more of an accurate indicator of social media dependency.

Results demonstrated that involvement patterns with social media were more of driving motivators to form social interconnectivity among respondents in comparison to the duration or intensity of their social media usage. Relatable results were unveiled in an earlier meta-analysis by Boulianne and Valenzuela (2020) when they argued that civic engagement is a determinant of how users involved with the virtual platforms instead of a duration of timespan with which they had been using social media. Kwon and Sung (2021) also related interactive patterns of users to be more influential in pro-social actions of users than time itself alone.

The current study findings found its relevance with Frison (2016), Kümpel (2018) and Nourbakhsh (2020) that the pro-social behavior as a result of content consumption was also irrespective of respondents' age. Furthermore, an urge of social connectedness in respondents did not show any direct linkage with the number of years they consumed social media or how much exposure did they receive on daily basis as it was found in the study of Hampton (2018) that an extended usage of social media does not necessarily translate into more robust community links or a greater sense of connectedness. It is possible that while the length of time and daily hours spent on social media might have played a minor role, factors other than the quantity or quality of social media usage were also intervening with causing an effect. Conversely, respondents whose social media usage was frequent for purposeful utilization and active contribution exhibited more communal and environmental engagement. This too had been validated earlier by Schreurs and Associates (2021) that users whose social media usage comprises discourse

related to environmental issues tend to form profound communal and environmental bonds. Additionally, a study of 2022 by Parry discovered that when users engage into social reformation activities on social media, this tends to enhance social activism in them. The users are more inclined to take part in community and environmental focused projects as a result of fruitful interactions on social media (Moor et al., 2021).

This study also observed the determinants of psychological manifestation after content consumption. It was found that effects on respondents' cognition was irrespective of their age suggesting that mental health was not affected consistently across different age groups of the sample frame. The number of years in which the respondents consumed social media, and the frequency of exposure they received on daily basis, had a minimal influence in shaping their cognitive schemas in comparison to the styles of their social media usage. Similar findings were shown in a research study by Vannucci and Associates (2017); although the frequency and duration of social media use are frequently thought to be predictors of mental health outcomes, the way people interact with social media i.e., their involvement patterns, such as active or passive scrolling, has a more noticeable impact on cognitive and emotional outcomes. This suggests that there might be no clear correspondence between using social media for extended periods of time or spending a lot of time on it to form psychological effects. Understanding the consequences of social media usage completely requires taking into account additional elements as well. Mental health was found to get impacted in whatever way users intended to use social media. A purposeful utilization of social media platforms was highly associated with stronger emotional and cognitive responses. Meanwhile, the active and passive consumptions of social media did not show much noteworthy impact on users' mental health. This implies that using social media to gratify a specific necessity in mind can lead to a formation of psychological effects in the users. All of this highlights how crucial it is to comprehend not just how much time individuals spend on social media but also how they interact with it; these factors contribute in generating a variety of effects on users' mental health.

Similar to the psychological manifestation, researcher in the current study aimed to observe how social media dependency aided in fostering societal and environmental networking in respondents' mindsets as compared to the temporal aspect of social media

consumption. This aligned with the fact that more an individual has a goal-driven strategy to rely upon social media for social happenings, the more he/she is influenced to initiate collective actions and pays visitation to different places. These findings matched with earlier literary foundations of a meta-analysis by Boulianne (2020) stating that people who intentionally utilize social media to keep themselves informed are more likely to take part in group activities such as events, protests, and social gatherings. Also, it was found by Guo (2022) that people who use social media strategically for social awareness frequently take part in more active travel, support group initiatives, and develop community ties because of the influence of social networks and online community ties.

The current study also discovered that respondents' pro-social behavior was slight in relevance to how old they were which signaled that with the passage of years an urge to engage in socially beneficial activities by and on social media boosts. Nevertheless, age was not a significant predictor like respondents' goal areas for social media dependency. This presented a deconsensus with a primary study by Carlo (2002) that individuals tend to develop a sense of social participation due to attaining a sense of purpose and social connection with the passage of years. Not to mention a study by Lovegreen (2013) also found opposing results that pro-social behavior, such as helping and volunteering, tend to rise with age and improve older individuals' social involvement and general well-being.

The above implied that social media effects are not solely determined by quantity of use, but also by the quality and purpose of social media involvement. Moreover, social media usage is often driven by an underlying motivation of a user. It may also be noteworthy that focusing on encouraging meaningful and purpose-driven involvement may be more helpful for people and organizations trying to use social media for good than just increasing usage time or focusing on particular demographic groupings.

Development of psychological effects as a result of reliance on social media in comparison to other factors like kinds of social media usage and demographic information was also a point of discourse in this study. Results suggest that age did not have a much significant influence on individuals' mental health; as age increases, social media

consumption does not uphold firm powers to influence cognition. Similarly, mixed estimates were sighted with content consumption from temporal aspect. No clear birth of psychological effects was observed in alliance with an individual's historical social media usage. This aptly suggests that regular users can grow numb to the cognitive effects or develop coping skills that lessen the intensity with time. These results direct us towards the classical findings by Vannucci and Associates (2017) who had stated that a prolonged engagement with social media leads to a development of numbness in negative effects and more acceptability of the content to cope. Later advancements in the domain cited similar findings that desensitization takes place when users develop habituation and resilience with the medium in usage (Orben et al., 2019; Verduyn, 2021). Conversely, users' daily consumption of social media content demonstrates that frequently turning to social media in twenty-four hours can some-what impact a user's mental health. However, results showed that it is not a sole determinant of psychological distress. Rather, it depends on goal-oriented individuals' intensity of seeking social media to gratify their needs which leads to such a manifestation. Users' active, passive and habitual involvement with social media also did not determine any significant impacts on their cognitive abilities meaning that psychological effects are devoid of how users interact in their offline environments.

Hence, it was substantiated that more reliance on social media was a cause of psychological effects. Earlier, social media dependency and engagement habits were observed by Davis and Moon's (2021) who stated that those with a high level of social media dependency and participatory usage left better imprints on cognitive health of users in comparison to those who participated less. Nevertheless, spending too much time online was found to disperse negative impacts on mental health regardless of involvement patterns.

Instead of giving weightage to the number of years in which the respondents consumed social media and the frequency of exposure they received on daily basis, the findings underscore a prime focus on users' dependence on social media and how can it be controlled to prevent psychological effects from rising. In accord to the result, lessening screen-time yields no solution to the problem. There needs a better and urgent

approach to address issues associated with users' dependency on virtual platforms so that there exist no adverse consequences on mental health.

Most importantly, the current study was intended to draw a conclusion on the basis of the intermediary power of users' dependence on social media between their use and post-consumption outputs i.e. psychological manifestation and pro-social behavior.

By measuring the former with varying variables, no significant association was observed with how old the users were to experience psychological concerns. Also from an above-mentioned analysis, the number of years during which users had been engaged with social media did not lead to some influence on their cognition whereas their daily consumption of social media slightly contributed to modifications in their mental health. The habitual users of social media had no cognitive fluctuations however active users did show positive signs of cognitive concerns. Worth mentioning is that users who actively associated themselves on virtual platforms and contributed through it differently posed psychological effects in minimal intensity as compared to the users who had a purposeful motive behind social media usage. Summing up, it was found that users' dependence to use social media for specific purposes, like information, networking or any other reason, was infact a direct cause of adverse effects over their mental health.

The results implied that the dependability of an individual on social media was affecting their mental health. In other words, it can be stated that social media dependency was found to be a significant mediator between social media usage and a cognitive aftermath of post-consumption. Subsequently it becomes relatable with the findings of the literature; A research finding by Griffiths and Associates (2017) demonstrated a strong correlation between increased stress levels and decreased well-being due to the binding forces of social media dependency between overall consumption and psychological outcomes. Similarly, Beyens (2020) indicated that those who relied heavily on social media were vulnerable to increased psychological impacts.

This highlights how essential it is to comprehend not only how much or how frequently is individuals' social media usage, but also the underlying causes of their social media usage patterns and how individuals form their social media dependency on their basis.

Coming to the latter, a measurement with varying variables bore no significant association with how old the users were to exhibit a pro-social behavior. Moreover, the amount of annual or hourly time spent on social media also did not develop any need to contribute in social or environmental activities. From it, it could be concluded that passive usage of social media did not foster social engagement in offline environment of individuals. The findings also revealed that individuals who engaged with social media as per habit depicted very slight positive social benefit probably due to casual networking and random content scrolling. On the other hand, individuals whose social media usage was purposeful had a strong inclination towards community engagement and social work. This underscored that using social media with a meaningful purpose led to beneficial outcomes. Relatively, active users were found to be well-knitted by interactive associations with virtual platforms to unveil a sense of social and environmental responsibility within themselves. This, however, contributed to a lesser extent of pro-social effect as compared to when users used social media with some specific need in mindset.

Upon evaluation with users' reliance on social media, the results suggested that it had a normal and not so strong influencing capability of driving pro-social activities of users. This could be related with an assumption that a number of other factors, both online or offline, could be contributing in devising the effect of social and environmental connectivity. Also, when social media blends its significance and importance in a user's routine, there's a likelihood that their online actions reflect their offline activities. This implies to the fact that social media dependency certainly proves as a driving force to magnify pro-social engagement within communities through their purposeful and active usage. This assumption of the study was partially verified by the findings when they argued that pro-social effects are risen as a result of quality of social media engagement and not just quantity of involvement within digital domain. Various scholarship of the past has discussed similar; Lee and Verduyn (2020) discovered that frequency of social

media usage did not prove to be a better determinant of pro-social behavior in the users than meaningful involvement with the content comprising educational postings or information regarding social causes. Later, Barnett and Bene (2021) discovered that young people who used social media with intention and thoughtfulness were more likely to act in a pro-social manner, supporting the idea that quality rather than quantity matters more in order for behavior to become affected in terms of altruistic behaviors.

6.2 Conclusion

To conclude, this research explored Pakistani young respondents' styles of engagement with social media forming various patterns/goals of dependency giving rise to psychological and social consequences. By an extensive and thorough analysis of the collected data from two different academic institutes, researcher in the present study aimed to investigate how the young population was engaging with social media to an extent of positive and negative effects on them.

The results of the study depicted that social media dependency was not a resultant of temporal factors like yearly or daily exposure to the digital medium; rather different types of involvement with social media showed various types of developed dependencies; habitual usage of social media was forming an unconscious cognitive dependency in the respondents giving rise to the psychological impacts. Apart from this, respondents with responsible (intentional and purposeful) usage of social media for attaining information and entertainment depicted strong direct signs of cognitive influence, suggesting that goal-oriented consumption of social media content was more persuasive in developing psychological effects. From here, it is suggested that there must remain a check and balance even when respondents are engaging in responsible screen-time.

Major contribution of this study yielded clarity that habitual or non-purposeful usage of social media (scrolling, passing time) does not depict significant development in areas like pro-social or psychological outcomes. However, on contrary, purposeful/intentional usage (sharing, content creation, commenting) correlated with a strong cognitive influence. It might not be inadequate to state that with a digital

interactivity, netizens could very well be prone to privacy violations and sometimes stressors affecting their emotional well-being.

Not to mention, the previous studies have looked it from an angle of age and duration of social media usage to be the greater determinants of psychological or behavioral implications. The findings of this study challenge this notion. There was no statistically significant influence on psychological health or pro-social tendency of respondents on the basis of their age and number of years they had engaged with the digital medium. From here, it is likely that users could become desensitized to certain psychological effects with the passage of time validating that emotional resilience takes over in the formation of digital habits.

It might also be seen from another perspective that responsible usage of social media was more influential in enhancing pro-social engagement (social and collaborative activities). It was also found that respondents who were engaged to seek information, were more into pro-social activities; community building, donations, charity etc. A correlation between a need to surveillance and pro-social effects was moderate highlighting presence of offline and psychological attributes as catalyst.

One more insight into the study was to identify social media dependency as a mediating variable (a linkage between use patterns and effects). The mediating role signifies the importance of dependency goals and developing interventions that address emotional and cognitive investments in digital spaces, especially among youth.

To conclude, the study helps in understanding that in the modern digital mediascape, where social media is a necessity for survival, it is more essential to know a purpose and intensity behind an engagement with social media as compared to the time spent. Social media has complex behavioral and psychological effects which are mostly influenced by users' intentions and the dependency that results from them. While responsible usage can lead to beneficial outcomes like decision-making, pro-social activities, there an excessive dependency on social media, especially habitual or emotionally-driven, might contribute to cognitive implications. Therefore, in order to promote social media usage among Pakistani youth or elsewhere that is healthy and mindful, this research aims to call for educational activities, policy interventions and digital literacy programs.

6.3 Limitation of the Study

Despite having foundational background of Media System Dependency Theory (MSDT), this study is not eliminated from certain limitations in relevance to social media dependency, psychological and pro-social effects.

Foremost is the limited scope of the sample on demographic/geographical basis confined to two universities of Islamabad; Bahria University and Quaid-i-Azam University. Although, both these universities represent a great blend of digitally literate youth, the findings cannot be generalized across all the universities of Pakistan or beyond due to differing socio-economic, cultural and technological factors.

Secondly, this study adopted a quantitative approach. Survey analysis inherently limits the depth of subjective interpretation. Although the statistical insights from regression and mediation analyses were strong, the quantitative approach limited the investigation of complex human experiences, emotional undercurrents, and sociocultural dynamics that qualitative approaches could have enhanced.

It may also be noted that the cross-sectional methodology of the study only records answers at one particular moment, which makes it insufficient to show causal correlations over time between social media usage, dependency, and the behavioral or cognitive effects of that usage. The changing paradigm of social media implies that dependency could be dynamic in future due to which there would last a non-durability in effects.

Last but not least, this study was carried out in the context of social media in general. There were no platform-specific variations to study social media usage, dependency and effects; Facebook, Twitter, TikTok and Instagram all have unique user-interface experiences. This lack of platform-specific research limits the findings' specificity.

Future recommendation directs towards an expansion of demographic scope, incorporation of mixed-method approaches in the research design, conduction of longitudinal observations, and integrating platform-specific variables to enhance the generalizability, depth, and validity of the findings.

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Question 2: Since how long you have been using social media?

Approx. two years Approx. five years Approx. ten years
Approx. fifteen years Approx. twenty years

Question 3: On average, how many hours per day do you spend on social media platforms?

One hour Two hours Three hours Four hours Five hours and more

Question 4: To what extent does social media usage consume a significant portion of your daily routine?

Not at all Slightly Moderately Very much Excessively

Question 5: What are the primary reasons for you to use social media?

Information consumption Networking purposes To kill boredom Simple entertainment To find self-relevance with the content

SECTION 2

Question 6: Do you use social media out of habit instead of looking particularly for the content?

Never Sometimes Rarely Often Always

Question 7: Do you view whatever interests you and gets your attention?

Never Sometimes Rarely Often Always

Question 8: Do you search any content by simply typing a specific keyword?

Never Sometimes Rarely Often Always

Question 9: Do you skim through your news feed only to check what's happening latest?

Never Sometimes Rarely Often Always

Question 10: As for your role, do you view, comment, or write feedback (e.g. on different posts, statuses, or tweets) on social media?

Never	Sometimes	Rarely	Often	Always
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Question 11: Do you share the content on your timeline or profile for others to view?

Never	Sometimes	Rarely	Often	Always
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Question 12: Do you use social media to socialize with others in an *offline* environment of yours?

Never	Sometimes	Rarely	Often	Always
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SECTION 3

How important is the information from social media, in fulfilling the following objectives in your daily routine?

Question 13: Does social media assist you in finding out about the latest happenings in your surroundings/community/society including events that you could take a keen interest in?

Never	Sometimes	Rarely	Often	Always
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Question 14: Does social media usage assist you in making day-to-day decisions by driving you to get engaged in certain activities while skipping the rest?

Never	Sometimes	Rarely	Often	Always
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Question 15: Do you use social media as a tool to review actions of your past and seek possibilities for personal improvement for the future?

Never	Sometimes	Rarely	Often	Always
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Question 16: Do social media platforms assist you in planning a better future for yourself and your loved ones?

Never	Sometimes	Rarely	Often	Always
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Question 17: Do you get facilitated by social media in seeking vast options for yourself to make decisions regarding purchasing products or accessing specific services?

Never	Sometimes	Rarely	Often	Always
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Question 18: Does social media help you in learning ways to manage yourself in times of conflict or crisis?

Never Sometimes Rarely Often Always

Question 19: Does social media assist you in learning how to handle a situation when you are confronted by your counterparts?

Never Sometimes Rarely Often Always

Question 20: Does social media serve you as a means of relaxation and diversion from your dull routine?

Never Sometimes Rarely Often Always

Question 21: Do you get pre-occupied with *online* activities on social media?

Never Sometimes Rarely Often Always

Question 22: Do you get virtually connected to attend events and meetings?

Never Sometimes Rarely Often Always

Question 23: Does social media generate enough content for you to engage in *offline* discussions with others?

Never Sometimes Rarely Often Always

Question 24: Does social media provide a convenient pathway to you for sharing your thoughts and feelings with others?

Never Sometimes Rarely Often Always

Question 25: Does your engagement in dispersing knowledge and awareness, on social media, contribute to the exchange of information and collective learning for others?

Never Sometimes Rarely Often Always

Question 26: Do you engage in self-disclosure (displaying and portraying your personality) on social media?

Never Sometimes Rarely Often Always

SECTION 4

Question 27: In your own experience, social media fulfil their role in raising awareness about social issues and also inspire you and others for collective actions in the society?

Strongly disagree Disagree I don't know Agree Strongly agree

Question 28: In your own experience, social media facilitate a community or organizations towards a collective action for social good or reformation?

Not at all To a small extent Neutral To some extent To a greater extent

Question 29: Do you engage in *offline* pro-social activities (*For example volunteering, helping others, participating in community events*) as a result of interactions or discussions on social media?

Never Sometimes Rarely Often Always

Question 30: Do you visit/travel to different places after exploring videos and content about them on social media?

Never Sometimes Rarely Often Always

Question 31: Do you get in contact with like-minded people after exhibiting your talents (*For example art, music, photography, blogging, or other self-disclosure activities*) on social media?

Never Sometimes Rarely Often Always

How do you understand your emotional wellness after using social media on the basis of following?

Question 32: How much are you generally satisfied in your life after consuming social media?

Not at all To a small extent Neutral To some extent To a greater extent

Question 33: How much does social media consumption influence your ability to manage daily life stresses effectively?

Not at all To a small extent Neutral To some extent To a greater extent

Question 34: How much does consuming social media contribute to your sense of purpose and meaning in life?

Not at all To a small extent Neutral To some extent To a greater extent

Question 35: How much does consuming content on social media influence your perceptions of your present circumstances and future prospects?

Not at all To a small extent Neutral To some extent To a greater extent

Question 36: Has your social media usage negatively impacted your productivity or ability to focus on offline tasks?

Strongly disagree Disagree I don't know Agree Strongly agree

Question 37: Do you find it difficult to stop using social media even when you intend to?

Not at all To a small extent Neutral To some extent . To a greater extent

Question 38: Do you find it difficult to relax yourself after using social media?

Strongly disagree Disagree I don't know Agree Strongly agree

Question 39: How much do you imitate others in terms of *lifestyle, achievements, or appearance* after seeing them on social media?

Not at all To a small extent Neutral To some extent . To a greater extent

Question 40: Do you discover new services through social media?

Never Sometimes Rarely Often Always

Question 41: Do you purchase a *product* based on the advertisement you see on social media?

Never Sometimes Rarely Often Always

Question 42: How much do you visit social media pages to purchase a *product*?

Not at all To a small extent Neutral To some extent To a greater extent

Question 43: Do you return a *product/service*, availed through social media, simply because you aren't satisfied after that?

Never Sometimes Rarely Often Always

Question 44: Overall how do you rate your commerce on social media?

Not at all To a small extent Neutral To some extent To a greater extent

